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ABSTRACT

This unit examines early life in Utah from about 10,500 BC until 1550 AD. Early human culture and changes in lifestyle during the Paleoindian, Archaic, and Formative periods are foci of the unit. The first period studied is the Paleoindian when humans first came to the North American continent and then to Utah and covers the period from 18,000 BC to 6,500 BC. The Archaic Period follows from 8500 BC to 500 BC. The Formative Period includes the early Anasazi 500 BC to 500 AD, the Anasazi Middle Pueblo from 500 AD to 750 AD, the Pueblo I Anasazi from 750 AD to 900 AD, the Pueblo II Anasazi from 900 AD to 1100 AD, and the Pueblo III Anasazi from 1100 AD to 1275 AD. The Fremont Culture developed from 500 AD to 1200-1300 AD. The Paiute, Gosiute, and Shoshone peoples arrived in Utah about 1100 BC, while the Navaho and Apache arrived around 1500 AD. The purpose of the unit is to present the chronology of the prehistoric Indian in Utah and develop an appreciation of the rich cultural background of the state. A listing of archaeological sites in the state is included, along with activities to supplement the text. (EH)

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UTAH PREHISTORY

Social Studies & Talent Training

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SEVENTH GRADE

MARY ANN ZIMMERMAN

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PREHISTORY OF UTAH
SEVENTH GRADE SOCIAL STUDIES
TALENT TRAINING ACTIVITIES

Written by:
Mary Ann Zimmerman

Cover by Ester Stringfellow

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Sandy, Utah 84065

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My grateful appreciation is given to LaMar Lindsey, Assistant State Archaeologist for the State of Utah, for the help he gave in the finalization of this script. His editing gives me the security of knowing that the information given herein is accurate. His belief in the need to educate children about Utah's prehistory motivated him to give a great deal of his time and effort.

Most of the pictures are reproductions of the slides which are in the "Prehistoric Kit". The kit can be obtained by contacting the Antiquities Department of the Historical Society at the Denver and Rio Grande Railroad Station. The pictures were taken by me: Spruce Tree House, Square Tower Ruin, Hoven weep, and the All American Man.

The pictures of the Pleistocene animals were copied with permission from the Great Salt Lake: a Scientific, Historic and Economic Overview edited by J. Wallace Gwynn, Ph.D., Utah Geological and Mineral Survey, a division of the Utah Department of Natural Resources Bulletin 116, June 1980.

My sincere appreciation is given to Marta Lake, a mother of one of the students in my classroom. She willingly gave of her time in such a professional way. She typed the script.

In addition I want to give recognition to an artist friend, a member of the Utah Statewide Archaeology Society, Ester Stringfellow, who creatively designed the cover to this booklet.

Mary Ann Zimmerman

UTAH PREHISTORY

by

Mary Ann Zimmerman

1987

PREFACE

This is a study of life as it was from about 10,500 BC until 1550 AD in Utah. You will study early man and his culture and follow him through many changes in his lifestyle. These changes are called periods: Paleoindian, Archaic, and Formative.

You will also study the environment in which man lived. You will look at the changes in the environment to give you clues as to why man changed. When man made changes in his lifestyle and his tools, it was brought about by changes in his surroundings. These changes show that man had adapted to his environment. Being able to adapt to change was necessary for man to survive in a complex world.

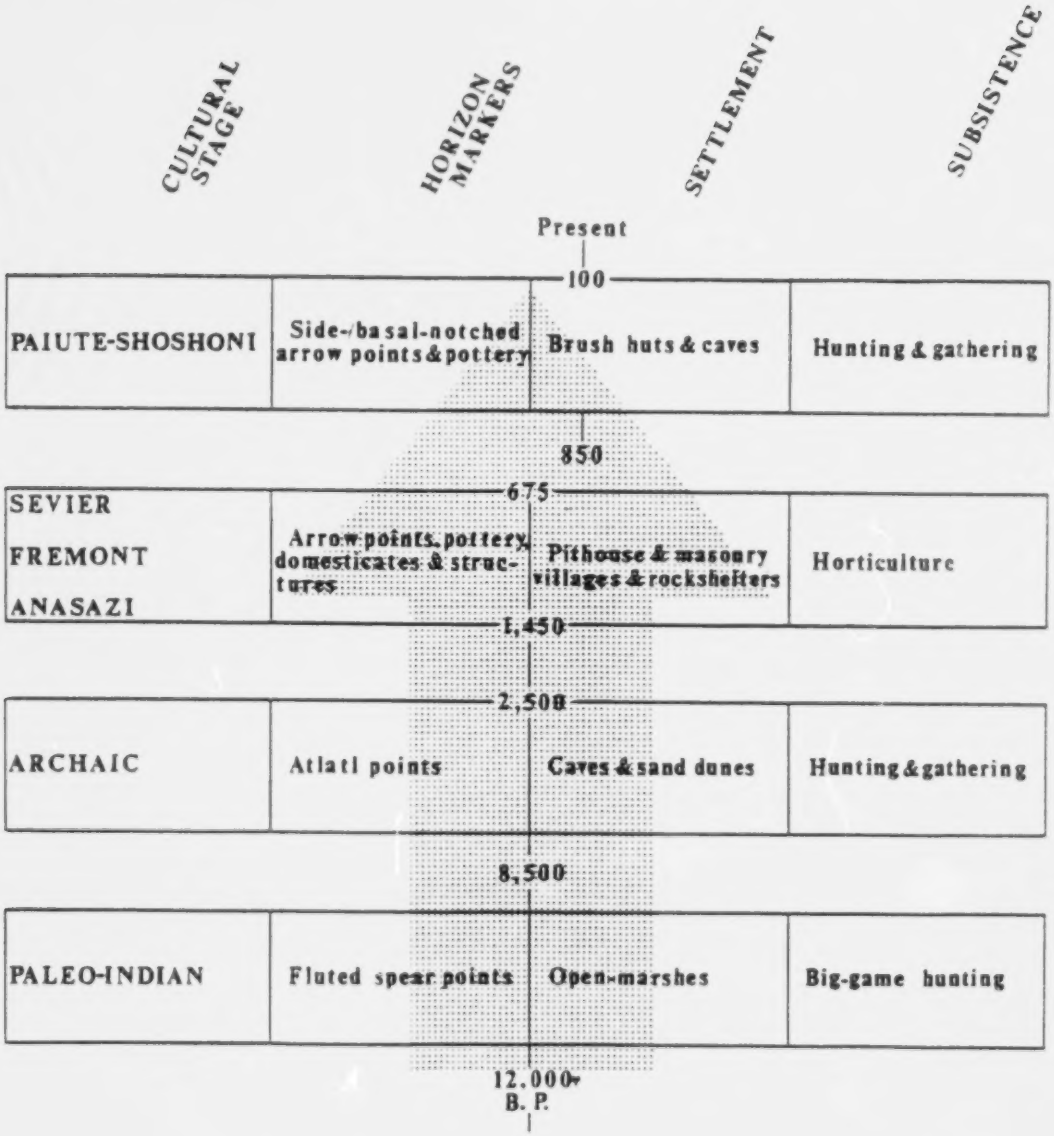
You will be studying the prehistory of Utah. Think for a moment on the word prehistory. What does it mean to you? Prehistory is that period of time when events that took place were not recorded in written form.

Since there is no written record, you will look at the evidence there is that early man existed. People who look for and record the evidence left by early man are called archaeologists. People who analyze and interpret the evidence in terms of their lifestyle and their culture are called anthropologists. All archaeologists are also trained to be anthropologists. Training in both areas is necessary to properly interpret Indian or Native American sites. The sites they are interpreting might be a permanent settlement where man lived. The site might be a temporary campsite which means it might have been used at certain seasons of the year. The site might be a campsite used only while he traveled through the area. The site might be a kill site where the hunter killed and butchered his game, and then returned home with the kill.

For an archaeologist to be able to interpret and learn from these sites he needs all the evidence possible. If someone has disturbed the sites, the information that could have been learned is lost for all time. In addition when the layers or stratigraphy of the sites are disturbed, they no longer record the sequence of man's life through time at this location. It is very important that each site be left undisturbed in order that it might be properly studied at some future date.

To understand the earliest Man in Utah, the Paleoindian, you will study how he came to the North American continent and then to Utah. You will also become familiar with the environment through which he traveled and the animals he hunted. This information will help you to understand what his life was like and the trials he had to overcome to survive . You will learn how early man changed as he proceeded through three periods of development - one leading into another. Each change was due, at least in part, to changes in the environment, and each change led man to a somewhat different, sometimes more developed culture.

THE PREHISTORIC CULTURAL SEQUENCE IN UTAH



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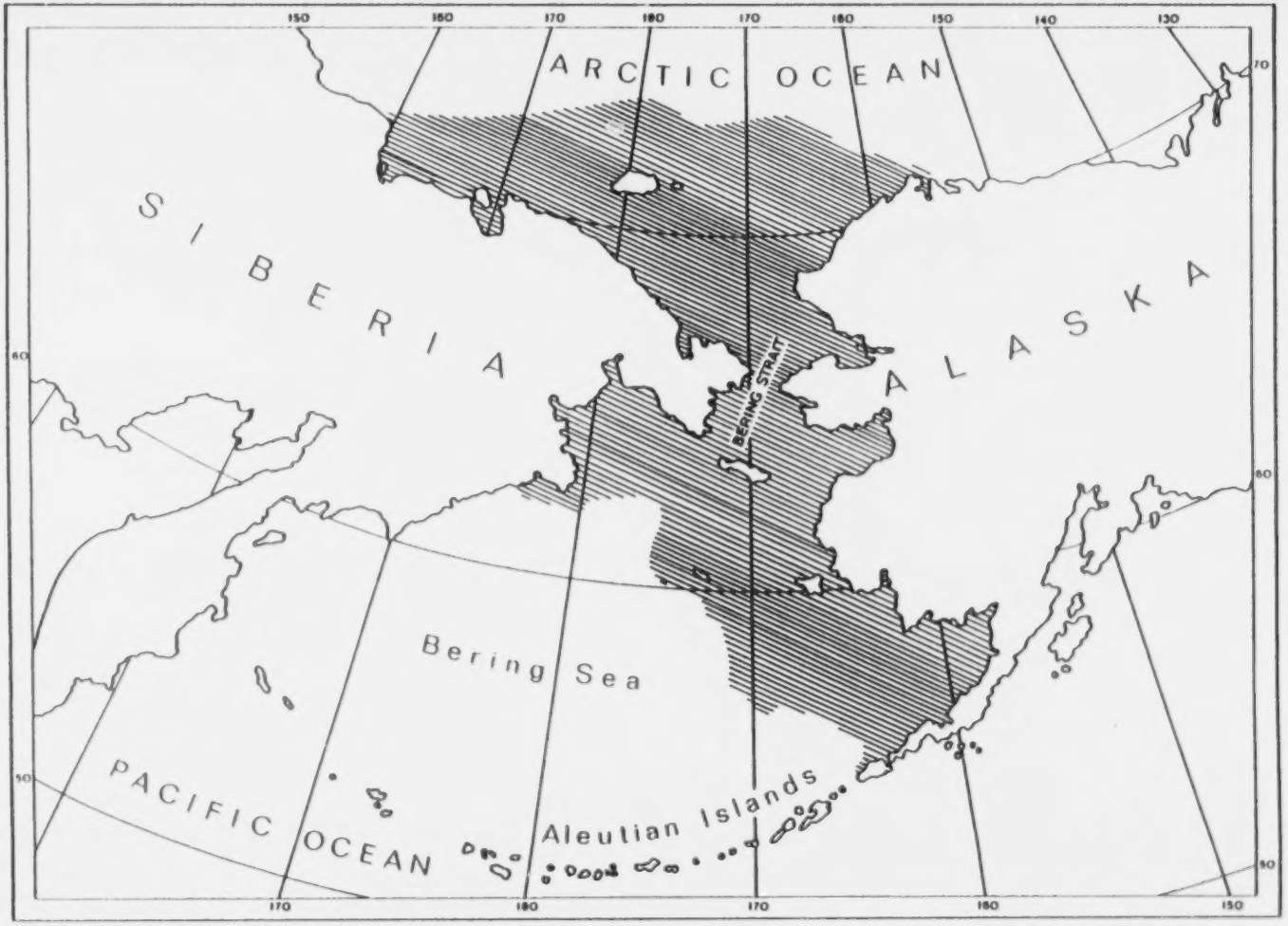
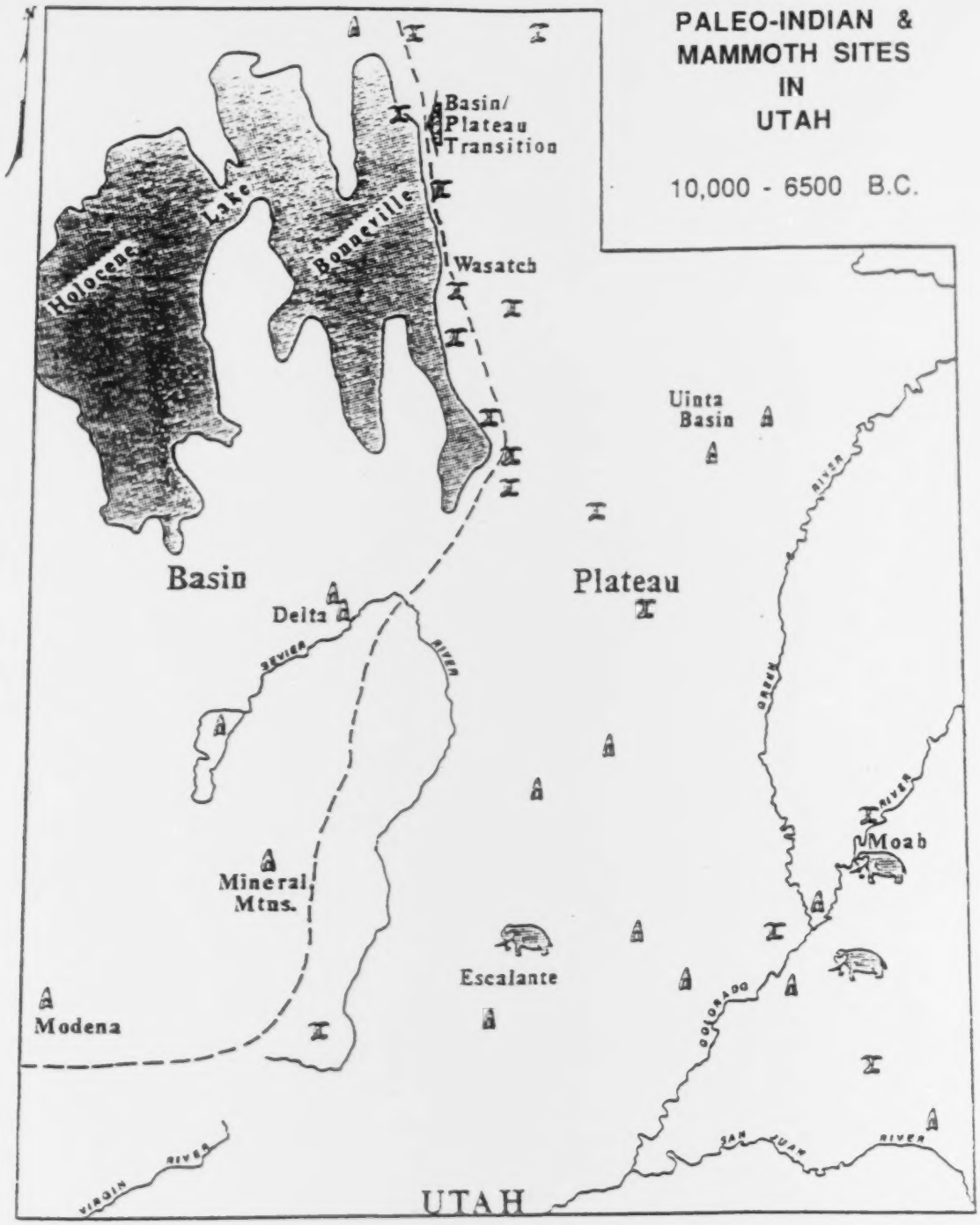


LEGEND

Shows the land exposed when the world's water supply was tied up in ice leaving a land bridge between Siberia and Alaska for early man to cross.



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PALEOINDIAN

Wisconsin Ice Age

For background and an understanding of Paleoindians' environment, let us look at the great Wisconsin Ice Age during the period from about 75,000 to 10,000 BC. During the Pleistocene Era, all of the northern sections of the world were covered with glaciers. The last glacial period is called the Wisconsin Ice Age. At its greatest size, it covered about 30 percent of the world's land mass.

It is known that the glaciers of the Ice Age both grew in size and receded or shrank at different times. When some of the earth's water supply was tied up in ice, the ocean level receded. When the glaciers melted, the oceans again filled up with water. When the ocean level was low, a great deal of land or shelf area around the continents would be exposed. This happened several times during the Ice Age.

When the water was low, a land bridge was exposed between Alaska and Asia across the Bering Strait (presently this area is covered with water up to 180 feet deep). This land bridge was a passageway from Asia to Alaska and could have been 1,000 miles wide at that point in time when it was the widest. This area is sometimes referred to as Beringia. It was a tundra or grassland and was suitable for grazing animals. When the passageway was open, animals migrated easily in both directions. The horse and the camel evolved on the American continents and migrated westward to Asia. The deer, elk, and moose were Eurasiatic and migrated eastward into the Americas. So both animals and man migrated across the passageway about 18,000 BC when this newly exposed area, Beringia, was passable. We must assume that man had already made adaptations which enabled him to survive in the cold. He had the stone tools to hunt and carve flesh. He must have used the remains of the animal for warmth and clothing.

Paleoindian - 18,000 BC to 6,500 BC

It is assumed that there was no mass migration of Paleoindian to the New World. Family units or bands of people probably migrated or followed the hunt to the New World over a very long period of time - hundreds of years. They arrived in Alaska and found the environment little different from what they left in Asia - therefore, they had no new adaptations to make.

During the Wisconsin Ice Age, Alaska was free of ice and was a rich hunting ground for Paleoindian. Besides deer, the elk, and the moose, there were many large animals called Megafauna. These animals - the mammoth, mastodon, bison antiquus, short-faced bears, and musk ox roamed the New World. They were a marvelous source of food as well as supplying furs for the survival of the stone age hunter. Alaska was also a natural habitat for the fox, the dire wolf, and the large beaver.

At different times during the glacial period of the Wisconsin Ice Age, passageways became ice-free between Alaska and the land to the South. You can easily imagine that Paleoindian would explore and follow the hunt through these pathways to wherever they lead. Slowly, but eventually, he migrated throughout the North and South American continents.

Paleoindian was a wandering, nomadic hunter who passed through many areas leaving stone tools as evidence that he had been there. He is known as the big game hunter who hunted the huge animals (Megafauna) associated with the end of the Ice Age.

His tools have been found at campsites, in caves, and at kill sites throughout the North American continent. His spears have been found with the remains of the mammoth and the mastodon as well as with the giant sloth. His spear points are easily identified and usually have the name of the site where it was originally found. The Clovis point is dated from 10,500 to 8,500 BC and has been found in every state of the continental United States. This point was beautifully flaked and was from three to six inches long. These are found mostly with the bones of mammoths and mastodons.

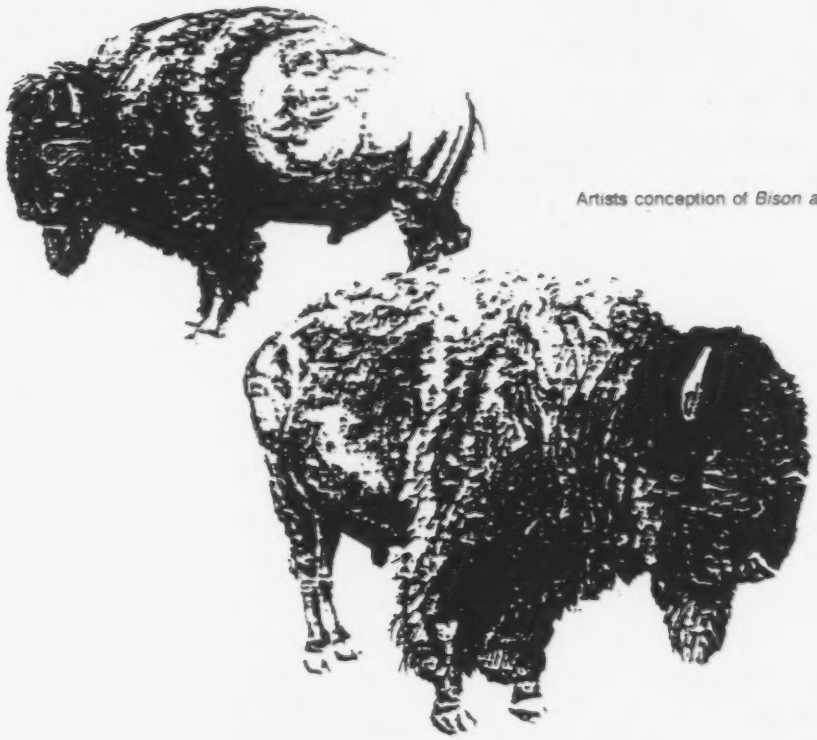
About 9,000 BC the Folsom spear point became the most common weapon. This point is beautifully made, too, but it is usually smaller than the Clovis. It is usually one to three inches long and is generally found with the bison antiquus or big horned bison. It too has been found over a great area of the United States, but to a much greater degree in the Midwest on Great Plains area.

Paleoindian killed animals by stampeding them off of cliffs, letting them fall to their own deaths. Many megafauna were herbivorous or plant eaters and ate in the marshlands. Attacking these animals mired down in the bogs and muck gave man an advantage in swamps. Certainly, Paleoindian had to use the environment to his advantage to help him capture and kill both swift footed animals or lumbering giants. To be sure, man must have often hunted in groups in cooperation with each other. Surely, we can assume that man must have lived together in groups in order to give each other support in both life threatening situations as well as in day to day events.

We do not know for sure very much about Paleoindian other than some of his tools and the animals he hunted. We do assume some things just because they seem necessary for survival. Man did survive and flourish in the New World. He did increase his skills and improve upon his weapons. He must have had a mate to increase his numbers. He must have had language which was spoken, but not a written language. He must have understood the need to gather together, for there was strength in numbers. He msut have had some understanding of his own needs and he must have had some understanding of his environment. We know he used fire, due to fire pits that have been dated to 10,000 BC. We know there were kill sites because he left tools with the bones of animals he killed. We do not know where he lived as little evidence of his dwellings have yet to be found.

This general information applies to Paleoman in the North American continent as well as in Utah. Now that you have this general information on Paleoindian, let us try to develop a picture of what it was like in Utah at the end of the Ice Age and try to understand the conditions under which Paleoindian lived in the state.

The camel *Camelops hesternus*, a less common element of the Pleistocene Bonneville fauna after a sketch in the Los Angeles County Museum of Natural History.



Artists conception of *Bison antiquus*.

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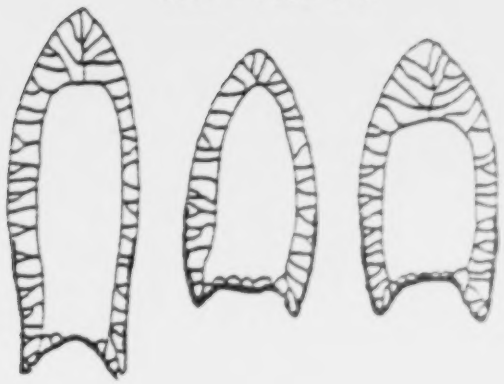
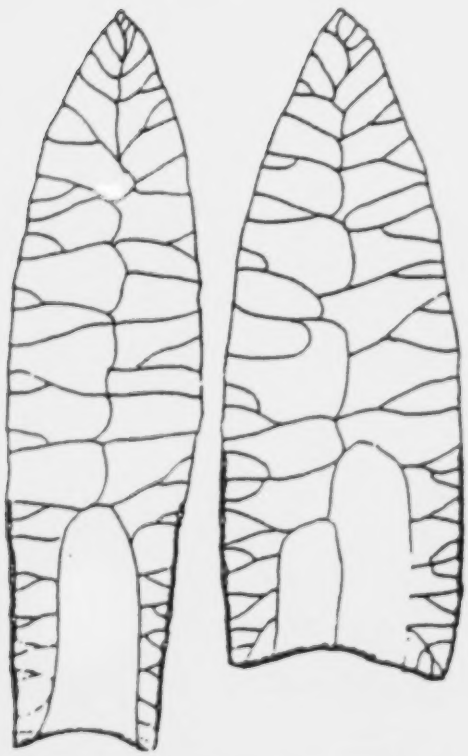
FOLSOM
8000 - 7000 B.C.



The Folsum spear point became the most common weapon around 9,000 B.C. and was used primarily to kill the bison antiquus.

CLOVIS
10,500 - 8500 B.C.



The clovis point is dated from 10,500 B.C. to 8,500 B.C. and was used by the Paleoindian to hunt the mammoth.

Paleoindian, the big game hunter, attacked mammoths with spears and stones using team work to make the kill.

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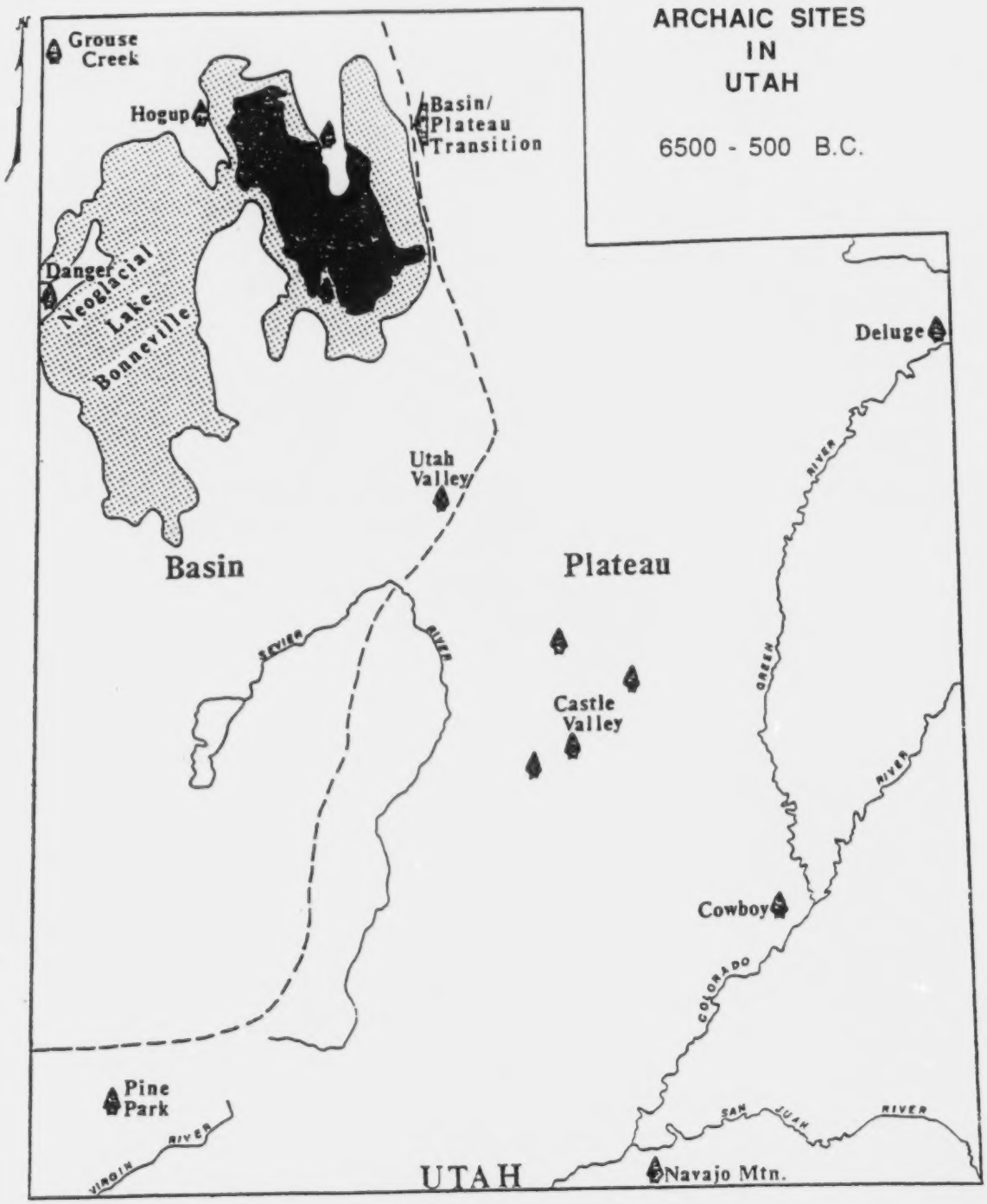
Paleoindian attacked the mammoths by driving them over cliffs and letting them fall to their own deaths.

The bison antiquus was mired down in the marshlands. This was helpful to the Paleohunters when they attacked big animals.



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End of the Ice Age in Utah

To better understand Paleoindian in Utah, let us turn our attention to the Ice Age in Utah and discover the kind of environment Paleoindian found when he migrated here.

Toward the end of the Pleistocene or Ice Age, about 10,500 BC, there was a warming trend in Utah. The glaciers began melting and receding. Streams ran from the glaciers to the valleys forming lakes and great marshlands. The water supply made Utah into a somewhat wetter and more fertile land than it is now. Grasses and marsh vegetation grew in abundance. This grassland was capable of supporting the large megafauna or large animals associated with the end of the Ice Age.

Lake Bonneville. The Great Salt Lake was much different then too. It even had a different name. It was called Lake Bonneville. It was 1000 feet deeper than it is now and stretched from the Wasatch Mountains on the east to the Nevada mountains on the west. To the north, it stretched from the Idaho border to the south of Cedar City. This was a giant among lakes and its water was fresh and glacial cold. The animals fed on the surrounding grasses and they came to the lake to drink. These animals were well adapted to the wet and fairly cold climate. The musk ox, the mammoth, and the short-faced bear were all warmly dressed in their furs - truly, a hunter's paradise.

As conditions changed, the weather warmed further and the lake receded. About 12,000 BC, during the Late Wisconsin Ice Age, the lake was at its highest level. This level is called the Bonneville level. You can easily see this level - the highest terrace - as you travel along the Wasatch Front from Provo to Ogden.

By about 12,000 BC, the water level dropped suddenly carving the terrace - known as the Provo level below the Bonneville level. The great drop was due to the break through of the lake at Red Rock Pass not far to the southeast of Downey, Idaho. The break caused huge amounts of water to flow north into the Snake River eventually reaching the Columbia River. The burst of water was said to be as large as the Mississippi River, and the lake dropped about 400 feet over a period of about six months. When you consider the size of Lake Bonneville, it boggles your mind to think of it dropping over a foot a day.

Paleoindian in Utah - circa 10,500 BC

About 10,000 BC the lake continued to drop slowly below the Provo level, due to a warming trend which increased its evaporation. The lake surface dwindled, becoming much smaller. The surrounding areas became marshlands. Many of Utah's lakes which were formed by melting glaciers began to recede or shrink. It can be assumed that Utah as a whole may have been a favorable location for animals to graze and man to hunt. Bones of many of the animals from the Ice Age have been found in Utah. Some of these fossils have been dated to approximately 8,000 BC and later. It is known that the animals that Paleoindian hunted lived in Utah. Paleoindians' spear points (the Clovis and Folsom) have also been found in Utah, but none of these have been directly associated with the large animal bone as they have in Arizona and Texas. It is, however, easy to assume that Utah was a favorable location for both Ice Age animals and Paleoindians.

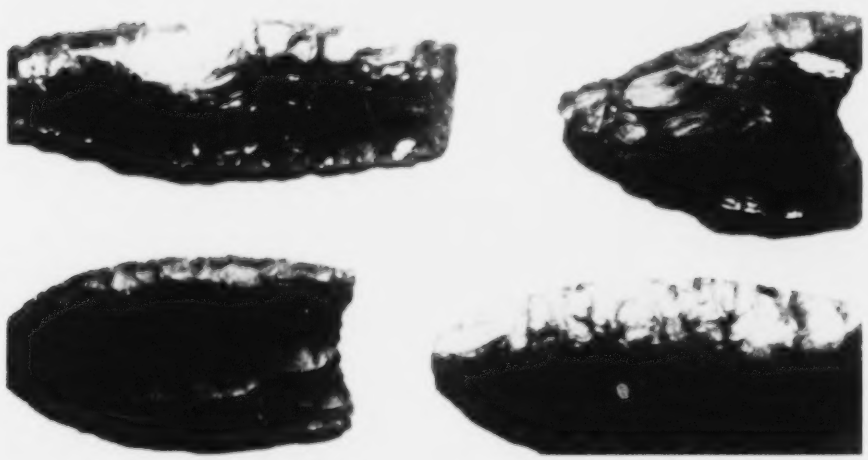
Utah Animals of the Ice Age

Utah has an interesting past. The large animals of the Ice Age, known as megafauna, have been found throughout the state. Animal bones have been found when basements for buildings have been dug, gravel removed from gravel pits, and passageways are made for roads. As information grows, the picture of the past becomes clearer. In order to be able to visualize Paleoindian in Utah let us discover what animals he would have found in Utah to hunt.

Musk ox - Several musk ox bones have been found around Lake Bonneville below the Provo level. They have been found in sand and gravel laid down during the late Pleistocene era. You can see examples of the skeleton of the musk ox at the Utah Museum of Natural History. One skull was found near Bear Lake.

Giant Short-faced Bear - Several bones of the giant short-faced bear were found in sand and gravel deposits on the Provo level of Lake Bonneville. The bear was radiocarbon dated to have died 11,000 - 13,000 BC. The bear was so extremely large that it was thought at first to be a new species of the short-faced bear. It has since been determined to be just a very large male bear. There can be a large difference in size in the same species due to its sex and diet.

Mammoth - There have been 19 different mammoth sites recorded in Utah. Most of the sites are near lakes, rivers, or ancient marsh areas. Part of a tusk was found in City Creek Canyon in North Salt Lake. Another was found in Wayne County in Cowboy Cave. (This is the same cave in which dung was found from ancient bison, ground sloth, horse, elephant and possibly elk and camel. The dung was radiocarbon dated to about 10,000 BC.)



These are Paleoindian projectile points which were found near Delta, Utah. Notice that the left point in the top row is a Folsum point.

An artists sketch of the MONROC bear, *Arctodus*. (?)

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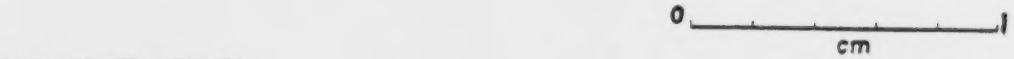
ELKO SERIES POINTS

ELKO SIDE-NOTCHED



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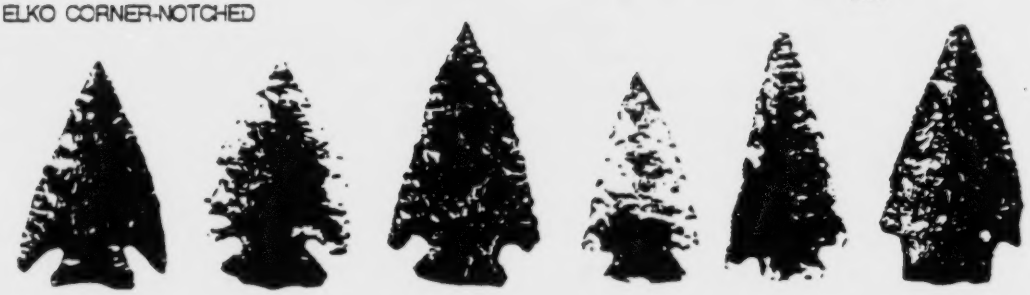
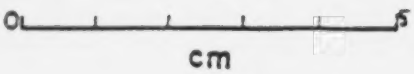


ELKO SPLIT STEM

ELKO EARED

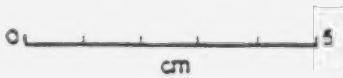
PINTO SERIES POINTS



PINTO SQUARE-SHOULDERED

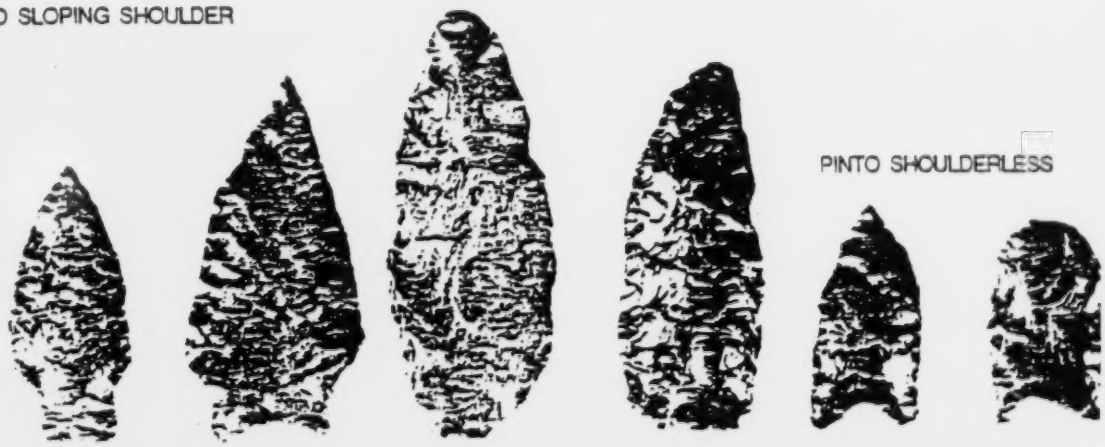
PINTO BARBED

HUMBOLDT CONCAVE BASE



PINTO SLOPING SHOULDER

PINTO SHOULDERLESS



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The bones of another mammoth were found during the construction of an apartment building in the town of Sandy at 350 West 8500 South in the Salt Lake Valley. Part of the bones were destroyed by heavy building equipment before it was realized that a mammoth was buried there. The bones were buried in a marshy environment formed by the lowering of the water level of Lake Bonneville. The bones were radiocarbon dated to obtain the age of the bones. Several different ages were obtained - an average age of 6,900 BC was obtained for the mammoth though they were originally thought to have been much older. Also, there is a petroglyph of an elephant (rock art pecked in stone) along the Colorado River near the town of Moab. Could it be that man was recording what he saw?

Camel - There is a Late Pleistocene lava flow southwest of the town of Fillmore in central Utah. this lava flow produced many tube caves and overhangs. In one of these caves, a camel skull was found buried under three or four feet of sand. At first, it was thought to be the remains of one of the camels that was brought to the Southwest in the 1870's. Upon comparing the skull from near Fillmore to the skull of the modern day Bactrian or Dromedary camel, it was found to be quite different. Then a radiocarbon date was obtained from the skull, and it was found to have been alive about 10,000 BC. This was exciting news because it was generally believed that the camel had been extinct for a long time and certainly extinct before the arrival of Paleoindian.

There are several petroglyphs of mammoths in Utah. This one is located near Moab, Utah

ARCHAIC
8500 BC TO 500 BC

Transition to Early Archaic Environment - 8500 to 6500 BC

The Archaic is characterized as a period which began during the early Holocene in which man adapted to his environment in a variety of different ways. His adaptation (the kinds of foods he ate, the ways in which he obtained it, and how he lived) depended on where he lived and what foods were available.

As the glaciers receded further and further north, the effects of the glaciers weakened in Utah. Cold breezes no longer blew across the ice keeping temperatures relatively cold throughout the year. Temperatures continued to rise. As the marshes evaporated and decreased in size, the grasslands also shrank and were very slowly replaced in some areas by forests, and in some places by desert sands. This left less foraging area for the large megafauna (game) that Paleoindian hunted. With a decrease in the food supply, these large animals were also endangered from another source - man. Paleoindian was either replaced by or more likely evolved into the hunters and gatherers of the Archaic Period by about 6,500 BC. The hunters of this period began hunting with a more efficient weapon called an "atlatl". This weapon, a throwing stick, increased both the distance and force with which man could attack wild game. Now that man had a new, more efficient weapon, he also found that he, with his fellow man, could drive herds of animals over cliffs in mass destruction. With the combination of both a changing environment and a changing, more efficient hunter, the megafauna were doomed to extinction. With a reduction in the supply of large animals, man during the Archaic Period, by necessity, became also a gatherer of wild plant foods, as well as a hunter of smaller animals.

There is one exception - one animal from the period may have adapted or changed to survive in the new, warmer environment. This animal is the bison or buffalo of today. It is a relative of the bison antiquus which was a giant in 10,000 BC with a vast horn span. He migrated east to the grasslands. It is possible that the adaptation of the bison was simply a reduction in size due to a smaller amount of food required. Stated another way, only those animals which tended to be smaller and required much smaller amounts of food survived. It may also be that the smaller animals were more fleet-of-foot and were more difficult to hunt so they were the ones to survive and reproduce.

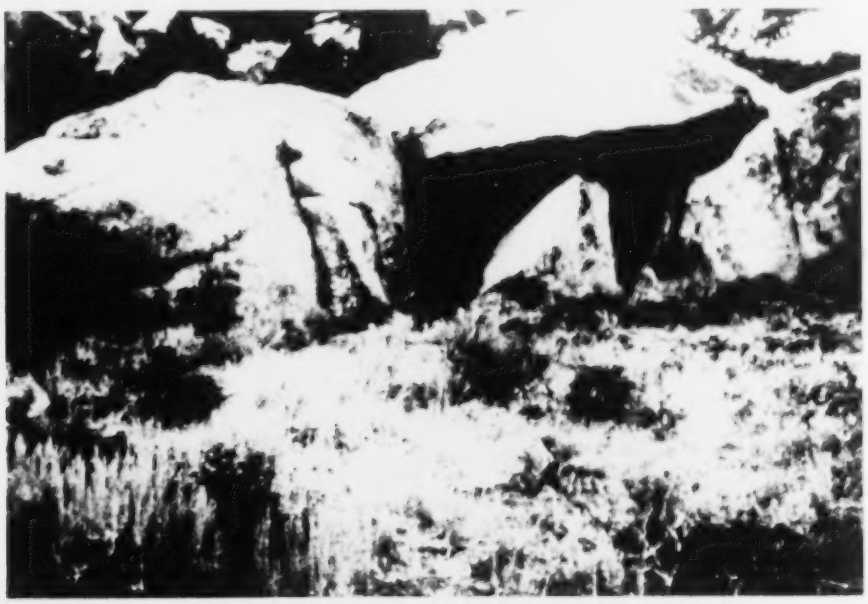
The animal most suited to adapt to a changing environment was Man - the hunter and maker of stone tools. Archaic Man adapted to his changing environment and he did so very successfully. He had followed the herds of animals which now were extinct and he had lived at the edges of fresh water lakes.

Now the weather was much warmer. There was increased evaporation and less rainfall. Most of the lakes in Utah either receded or disappeared. The Great Salt Lake, as it is now called, became much smaller as it receded and it became salty, but at the same time fresh water springs were exposed along the edges of the lake.

Early Archaic - Man from 6,500 to 5,000 BC

Archaic man moved into caves and rock shelters surrounding the lakes. He drank from the springs and found his food in the marshes surrounding the lake. He ate plants such as pickleweed seeds, fruit of the prickley pear cactus, bullrush seeds, and parts of sedges and animals such as rodents, and waterfowl which were caught in the marshes. He hunted antelope, mule deer, desert bighorn sheep, and black-tailed jackrabbit. He began making twined and coiled baskets, and sandals for his feet from the reeds in the marshes. He gathered seeds which he placed on flat slab milling stones. He then ground and crushed the seeds with a stone or cobble called a "mano" ("hand" in Spanish) which is held in the hand. He made rabbit skin robes, and imported seashells from the Gulf of Mexico and the Pacific Ocean.

His toolmaking also changed. He no longer needed the Clovis or Folsom spear points which he had used against the mammoth. Now he needed projectile points which he attached to spears that were used with the "atlatl" (spear thrower or throwing stick). These points are called Pinto, Humboldt, and Elko points. During this period of time, man migrated from site to site as food became available in different areas and at different elevations.



Archaic man moved into caves to live. This cave is in the Great Basin south of Wendover, and is called Scribble Rock Shelter.

Archaic man used the marshlands extensively to hunt, to gather plants to eat, and to gather reeds to weave.

This is a current picture of the Great Basin marshlands. Marshlands are the most productive area there is for producing food and material for man.

Archaic man made both twined and coiled baskets. These were recovered from a large cave in Box Elder County.

Archaic man made stone tools and weapons. In the Great Basin, obsidian (volcanic glass) was used extensively because this material was readily available.

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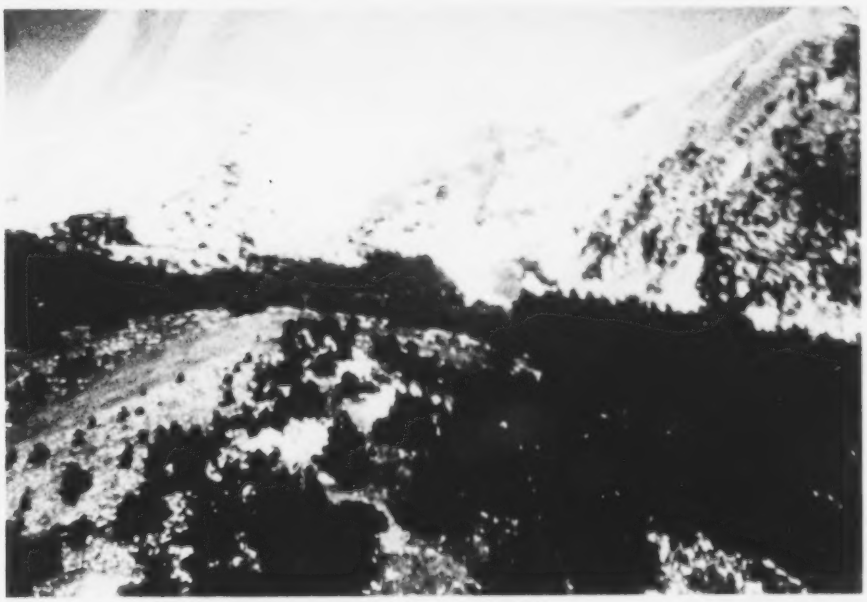
Middle Archaic - Man from 5,000 to 2,500 BC

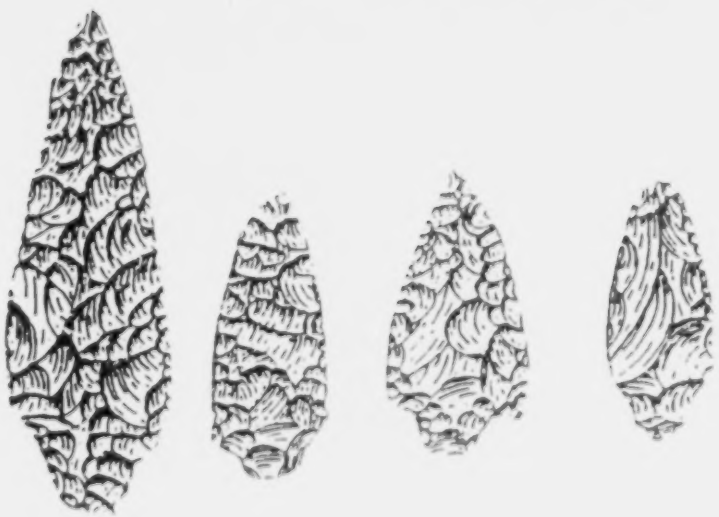
As the warming continued, the Great Salt Lake continued further to recede and then it may have become quite small in size and it, of course, became even saltier. The much hotter and drier weather pattern, with less rainfall, caused man to adapt to new conditions including changing his habitat. He increasingly used upland sites in the mountains, such as the Wasatch, Raft River and Deep Creek mountains, that surround the lake basin. He could forage for food bothe in sage grasslands and in the forests where he hunted mountain sheep, deer, rabbits, and occasionally bison. During about the middle of the period, the weather became somewhat wetter although it remained hot. This may have allowed man to move back to valley locations from the upland sites. A new style projectile point called the Gypsum was used toward the end of this time.



As the warming trend increased and the Great Salt Lake became saltier, Archaic man moved into the uplands and the mountains to hunt mountain sheep and deer.

During the middle of the period, the weather became somewhat wetter and Archaic man moved back into lowlands where he could forge for food in sage grasslands. At this time the Gypsum projectile point came into use

GYPSUM PROJECTILE POINTS



Man During the Late Archaic - 2,500 to 0 BC

During this period, the weather at certain times (about 3,000 BC and again about 1,000 BC) became somewhat cooler. This change in the weather occurred across the several continents of the northern hemisphere and is called the Neoglacial or "Little Ice Age." This allowed the Great Salt Lake to rise because of evaporation during the summers was less. By 1,000 BC, the lake rose to a very high level, flooding surrounding marshes where man hunted waterfowl and collected seeds. Man was again forced to move to the uplands in search of wold game and to gather wild plants. About this time there is good evidence that man concentrated on the gathering of pine nuts and the hunting of the larger game present at the time, such as deer, elk, bighorn sheep, and antelope. A quite different projectile point appears at these sites at the end of the Archaic Period. These are call Rose Spring Corner-notched points. This quite small, but very well made point, was used with the bows and arrows. Just as the atlatl was invented for use with spears during Early Archaic, the invention of the bow and arrow allowed man to hunt with weapons which hurled projectiles further, faster, and more accurately at the wild game that he sought.

Several caves have been excavated in Utah by archaeologists. These caves revealed the tools, artifacts, and food supply of Archaic Man. The research at Danger and Hogup Cave tells the continuing story of Archaic man's lifestyle and his development.

ROSE SPRING
CORNER-NOTCHED

ROSE SPRING
SIDE-NOTCHED

The well made Rose Spring corner-notched arrowhead appeared on the scene at the end of the late Archaic Period and indicates the introduction of the bow and arrow.

Danger and Hogup Caves

There are two caves in the Great Salt Lake area which the Indians occupied over a very long period of time. One was Danger Cave near Wendover, Nevada, and the other was Hogup Cave near the northwest shore of the Great Salt Lake. The excavation of the caves showed that Danger Cave was occupied from 9,000 BC to the 19th century. Hogup Cave was occupied from 6,400 BC to 1470 AD. The artifacts on the upper levels of the caves showed more recent occupations. As the excavation continued to deeper levels, artifacts from older and older cultures were uncovered. These caves showed continued Indian use through all three stages of development - Paleoindian, Archaic, and Formative.

Danger Cave was excavated and a great many artifacts were found. There were tools made of both stone and bone. The tools made of stone were knives, projectile points, scrapers, etc. - tools which require a cutting edge. These tools were made of chert, chalcedony, jasper, and obsidian. The bone tools were made from animal, and they were used to poke holes or make stitches in hides. There were other stone tools: flat stone slabs, called milling stones or "metates", and grinding stones, called "manos". All Indians beginning with Archaic man used these two items to grind seeds, nuts, etc., into a sort of flour or meal.

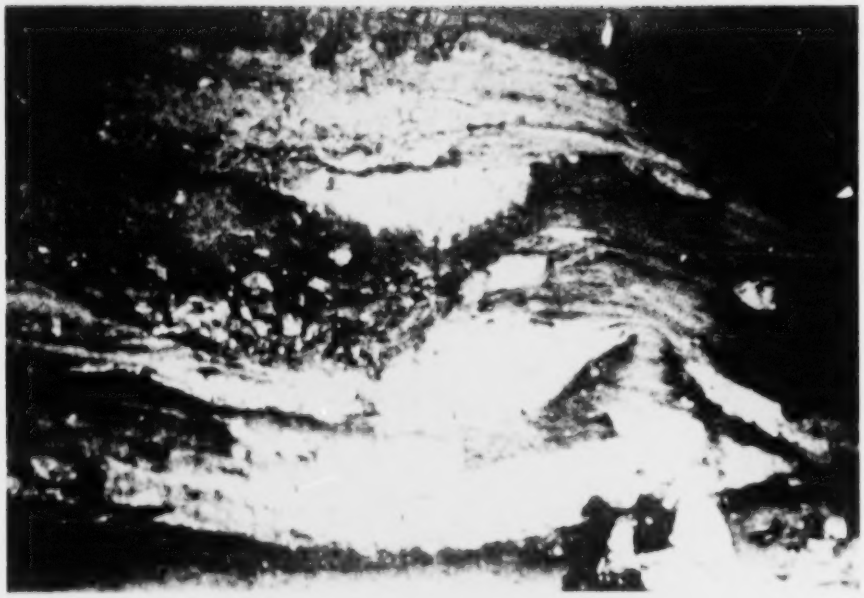
The most numerous artifacts found were made of wood or vegetal materials such as bark, twigs, stems, and fiber. These materials were used for baskets, mats, sandals, and twine or ropes, etc.

Near the top layer of dirt in the cave, artifacts were found which are identified with the Fremont Indians of the Formative stage. There were sharpened twigs, which are called Promontory pegs. The use of these is unknown, although they may have been used in connection with nets used to capture small animals for food. There were unbaked clay doll-like figurines representing both humans and animals. There were pieces of Salt Lake gray pottery, which were made by the Fremont.

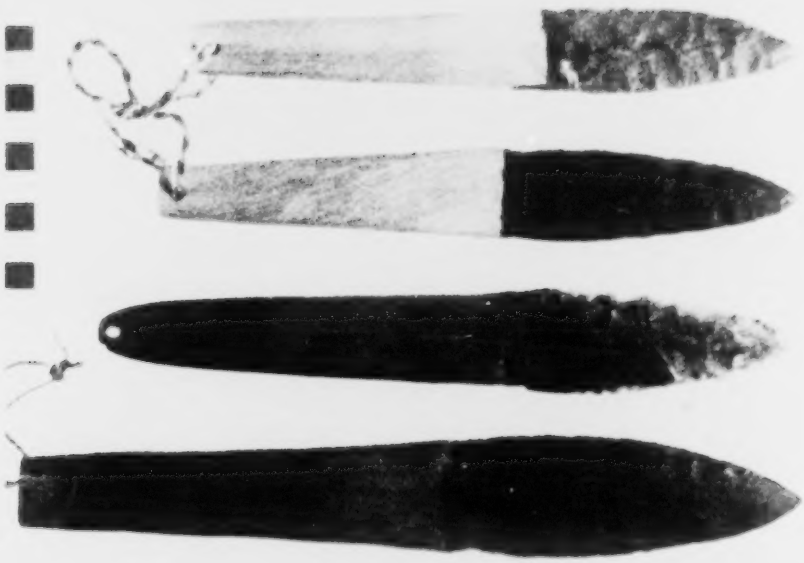
The top layer contained pottery from Indians which today are known as Paiute and Gosiute. This proves the cave was used into the 19th Century.

Danger Cave is exciting to those interested in Utah's prehistory because it tells a continuous story of Man's development or change through time. The artifacts from the oldest layer of the cave to the present cave surface record the changes in his tools and in his food. The remains from the plant life he ate and used also record the changes in the environment. Changes in the plant life reflect the changes in the temperature and the amount of rain. The plant life could be identified because the cave is very dry; therefore, the plant materials had not decayed or rotted due to the damaging affect of water.

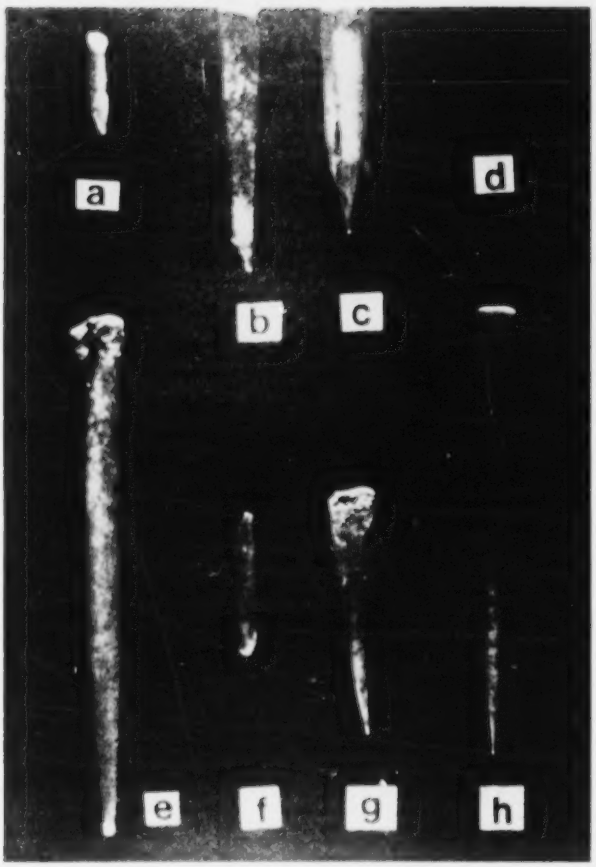
Hogup Cave was not in use over as long a period of time as Danger Cave; however, the information uncovered at this cave supports or fits with the information learned from Danger Cave. As a result we are able to see patterns in Indian life over a long period of time. Should you like to know more about the development of man during the Archaic Period, you can investigate further the information on Danger and Hogup Caves at your local library.



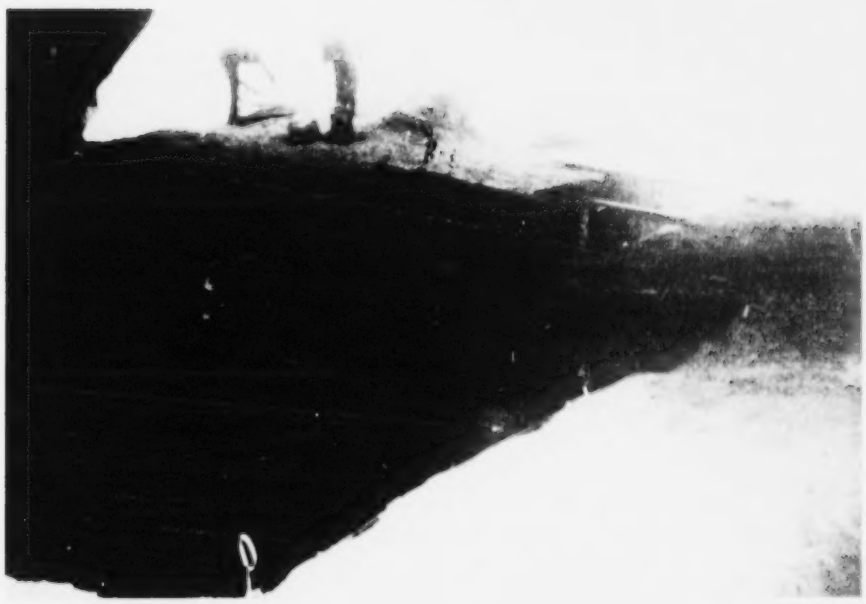
Danger Cave just east of Wendover, Nevada revealed, when excavated, that there was a continuous rise of the cave for over 11,000 years. Each change in artifacts was revealed as layer after layer was exposed to careful archaeologists.



Stone knives similar to these were excavated from Danger Cave. Stone blades were attached to bone handles by using pitch and sinew.



Brown tools called awls were also excavated and were used for punching holes into hides for sewing.



Excavation of Hogup Cave on the west shore of the Great Salt Lake revealed that it was not occupied until 6,500 years ago. It did however support the information learned at Danger Cave and revealed patterns of Indian life over a long time.

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FORMATIVE PERIOD

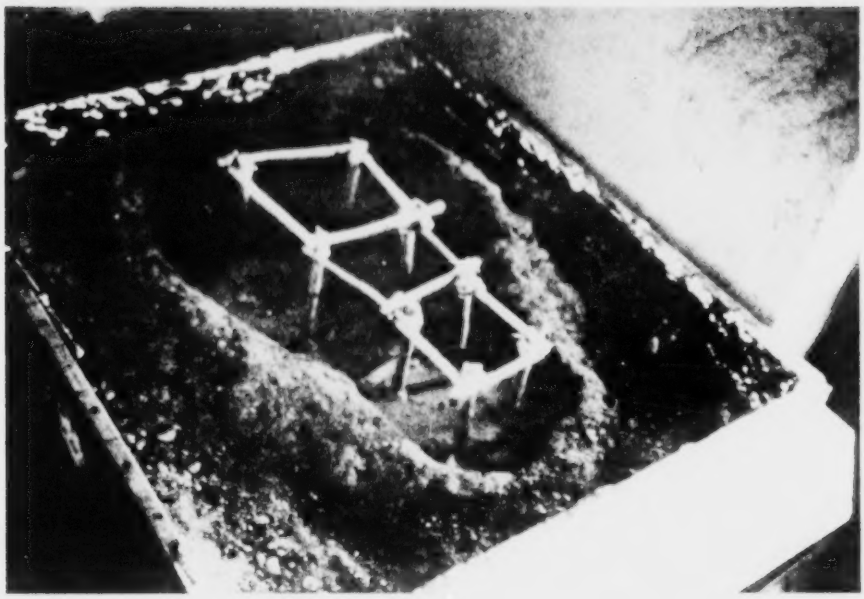
Transition to the Formative Period - 500 BC to 500 AD

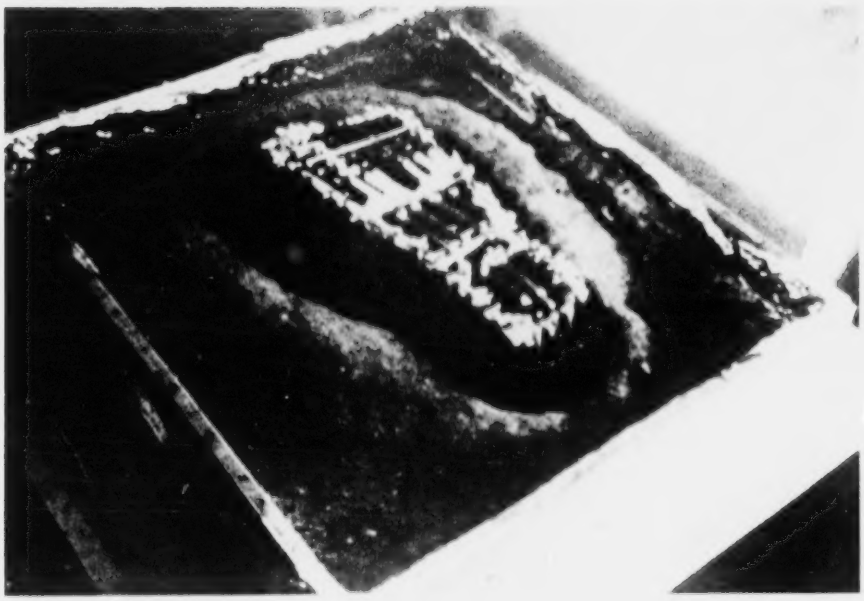
The Archaic moved quite rapidly into the Formative Period when several inventions occurred including the use of the bow and arrow, plant domestication, and pottery. The transition seems to have been quite rapid compared with the transitions of earlier periods because these inventions spread rapidly and together they were quite revolutionary. This is to say that they caused great change in the way man got his food and in his lifestyle. As a result of such changes, populations greatly increased and a number of different cultures developed in the southwestern United States, including the Hohokam, Mogollon, and the Anasazi. Of these cultures, only the Anasazi lived in Utah.

The transition from the Archaic Period to that of the Formative is best understood in the Southwest in the states of Arizona and New Mexico and in Southern Utah where we can see the arrival, from Mexico, of the domesticated plants, corn, beans, and squash. In Utah, these plants were first used by the Basketmaker Indians who were ancestral to a later people we now refer to as the Pueblo. The Anasazi, including both the earlier Basketmakers and their descendents, the Pueblo, lived primarily south and east of the Colorado River. The development of the Anasazi is best understood by changes in lifestyles at certain times. Archeologists recognize these as substages which occurred during the Formative and which are associated with changes in types of dwellings and of other artifacts, particularly pottery.

Basketmaker II Anasazi - 500 BC to 500 AD

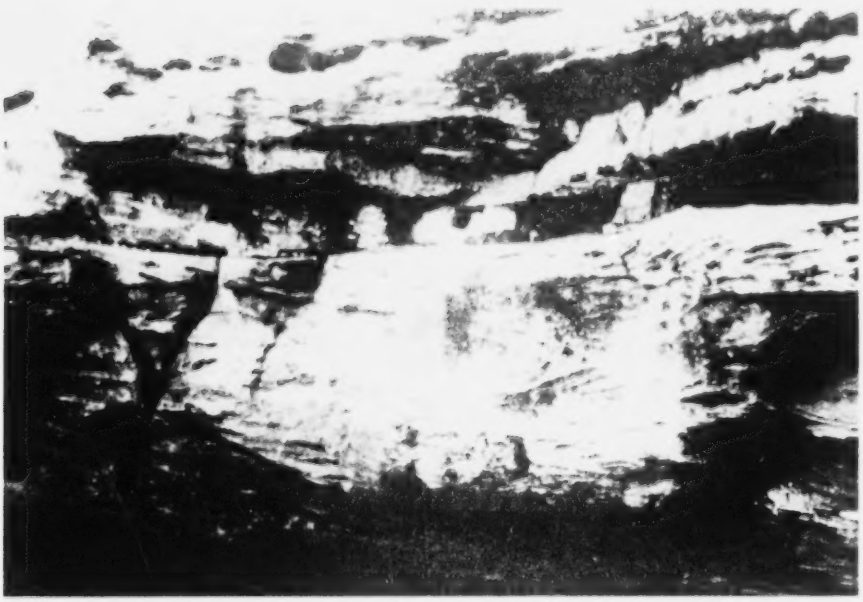
The earliest recognizable stage during the Formative is known as Basketmaker II because of the beautiful, well-made basketry which the people made during the period. This was before the introduction of pottery. The people continued to use the spear. These people were at first unchanged, continuing in the ways of the Archaic that you have just read about. They continued to hunt wild game and to gather wild plant foods, but in addition, they obtained a few seeds and began to plant a few crops. Planting crops requires that you live in one place, at least until the crops ripen. Staying in one place requires building a place to live. Some people remained in caves - some caves were large enough to place buildings within them. Others chose to build pit houses. Pit houses were partially dug into the ground. Posts were set into the ground which supported the large roof beams. Smaller side posts leaned from the edges of the pit to the roof beams. These were laced with still smaller sticks, brush and grass and then covered with mud. Once the mud dried, such houses could be heated quite warmly by burning wood in the central fire pit. Smoke from the fire rose and escaped from a hole which was constructed in the roof. A ventillator shaft on one side of the house allowed fresh air to enter. The houses were either circular, square, or rectangular. People who lived in pit houses also continued to use caves where they built storage cists. These little one or two room structures of dried mud, rock, stone slabs were sealed very tightly to keep out rodents which would try to get at the food. Rodents were always a problem. Caves seem to have been the best place to live because they were not exposed to the sometimes heavy rains which could occur, particularly during the summer in the Southwest. You can imagine that houses built in the open often needed to be repaired following heavy rains.





The three pictures are models of three stages of construction of a Basketmaker pit house. The first picture shows the interior support posts and the roof support beams. The second picture shows the main wall posts with the roof beam construction. The last picture shows the final stages of construction. Limber sticks and brush were woven between the side posts and in and out of the roof beams. Then mud was spread over the sticks and brush forming sort of an adobe or caliche. The hole in the roof was the entrance to the home. It also allowed smoke from the fire pit to escape.

This is a Basketmaker III pithouse which was excavated during the construction of Highway 163 west of Blanding, Utah. Notice how the site was excavated around a modern day fence.



Basketmaker II built stone and/or mud storage grainery sites to store food. They were located near dwellings or away where the fields must have been. Many are high on cliff edges and appear to be quite inaccessible.

Basketmaker buried their dead in the back of caves wrapped in fur skins or cloth and with baskets, sometimes containing corn.

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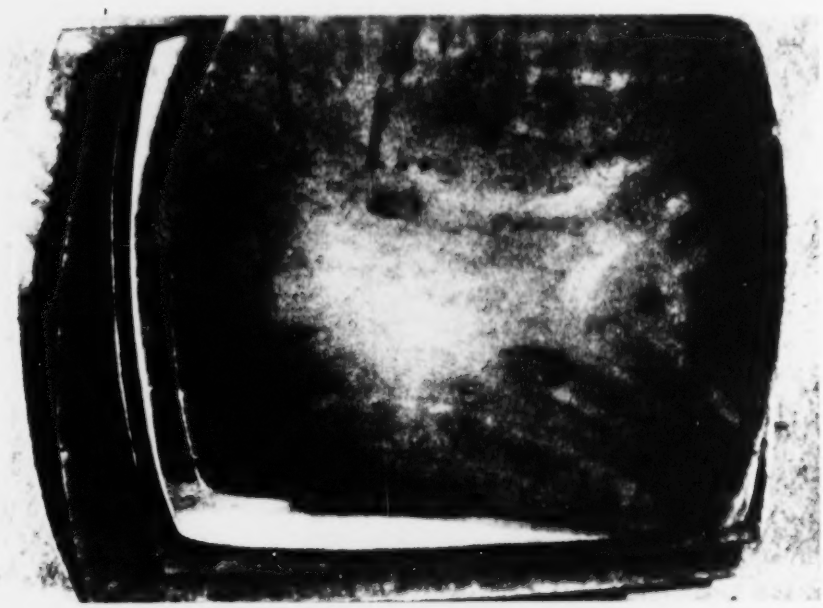
Basketmaker II people made sandals and fur blankets. They ordinarily buried their dead in caves, wrapped in body wraps of fur, skin, or cloth and with baskets and sometimes corn for use in a time to come. Although the evidence of these people is limited, they represent an important step toward the extensive developments that followed.

Basketmaker III Anasazi - 500 AD to 750 AD

Basketmaker III people represent the next stage of development following Basketmaker II. They continued to use baskets, but they now made pottery. This is an important step which improved the preparation and storage of foods and water. The pottery was generally plain gray; however, some were decorated with a black paint made from minerals. The spear continued to be used, although by now the bow and arrow had been introduced. Small arrowpoints known as stemmed points were made. The large points used with spears were also used as knives. They built larger pit houses sometimes reaching over 20 feet wide. Some of the larger ones are thought to have been used as communal dwellings where the leaders of the village were able to meet together. Houses were also constructed in caves and rock shelters located in alcoves and in the canyon walls. The people hunted and farmed. Archeologists are certain that the population during this time grew in large numbers because a great many Basketmaker III sites have been found. We are able to say that during a part of this period, more people lived in the southeastern part of Utah than there are today.



These Basketmaker III wooden plates were excavated from a rock shelter at Westwater Five Kiva ruin west of Blanding, Utah. It is assumed they were used for eating.

These stone knives are shown as they were found when they were excavated from the Westwater Five Kiva west of Blanding, Utah

The Basketmakers were named for the beautiful baskets they made. This basket contained corn when it was excavated from the Westwater Five Kiva ruin west of Blanding, Utah

Pueblo I Anasazi - 750 AD to 900 AD

The Pueblo I stage followed those of the Basketmaker. The stage is quite brief and variable, lasting in some places for only about a hundred years. Pueblo I people experimented with making new pottery types. While the plain gray continued to be used, they also made a red ware which included those decorated with red-on-orange, and black-on-red paints. One pottery type is known as a polychrome (three colors) of red and black-on-orange. People still lived in pit houses, but now they also began to construct surface rooms of mud and using some stone. These were probably used for storage. In some areas of southeastern Utah, the people left the valleys and canyons and moved upland to the mountains. This may have been because of brief droughts in which there was no rain at lower elevations for farm crops during the summer. Generally, more rain falls in the mountains while valleys and conyons remain quite dry. Also, more wild game would have been available in the mountains.

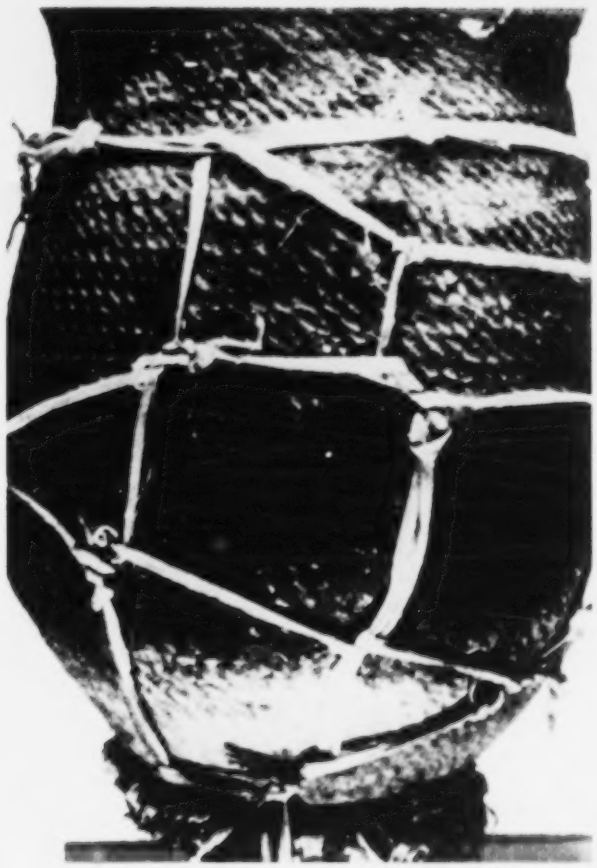
The Pueblo I Anasazi continued to make plain gray pottery, but they began making decorated red-on-orange pottery.

Pueblo II Anasazi - 900 AD to 1100 AD

Many changes occurred during this stage of development. The time is known as the period of great expansion when sites occur almost everywhere including much further north than they had been during earlier Anasazi developments. There were a considerable number of people living in the southeastern and southern parts of the state. The growth during the period is thought to have been because the climate during this two hundred or so years was very favorable for agriculture. The people during this time were very successful farmers.

They no longer built pit houses. The people began to construct masonry rooms which were used as dwellings. In some places, masonry was very carefully laid much in the same way that brick masons lay bricks while building the homes of today. Masonry rooms were constructed in a semi-circle surrounding kivas which were dug much like the earlier pit houses. Kivas were used for ceremonies, primarily by men, and not as dwellings. This is based on the use of modern day kivas by the Hopi of northern Arizona. Each kiva contained wall niches on the north for the storage of ceremonial objects, a central fire pit, a recess in the wall on the south, and, beyond, a ventillator shaft to allow for fresh air. A stone deflector was always constructed between the fire pit and the ventillator to protect the fire from drafts which could blow into the ventillator shaft. The interior features in kivas are always aligned, either northwest to southeast or from north to south. Middens or garbage dumps are always found to the south or southeast of the kivas. Pueblo II people continued to make white pottery decorated with black paint, but also they began using a type known as corrugated. This type of pottery was made by laying down pencil thin coils of clay. The coils were pinched together, which produced a wavey pattern on the outside of the vessel with the inside smoothed. This type of pottery was ordinarily unpainted.

You are looking down on a Pueblo II kiva. The depression is the fire hearth. The hold to the left of the fire hearth is called the sipapa (the mythical entry to the world). To the right of the hearth is a deflection beyond which is the ventilater. Notice how they are all in alignment.



Pueblo II people began making corrugated gray pottery. This pot is wrapped in Yucca fiber.

This is a corrugated gray pot in the process documented as to it's location before being excavated. It must be carefully removed for further study.

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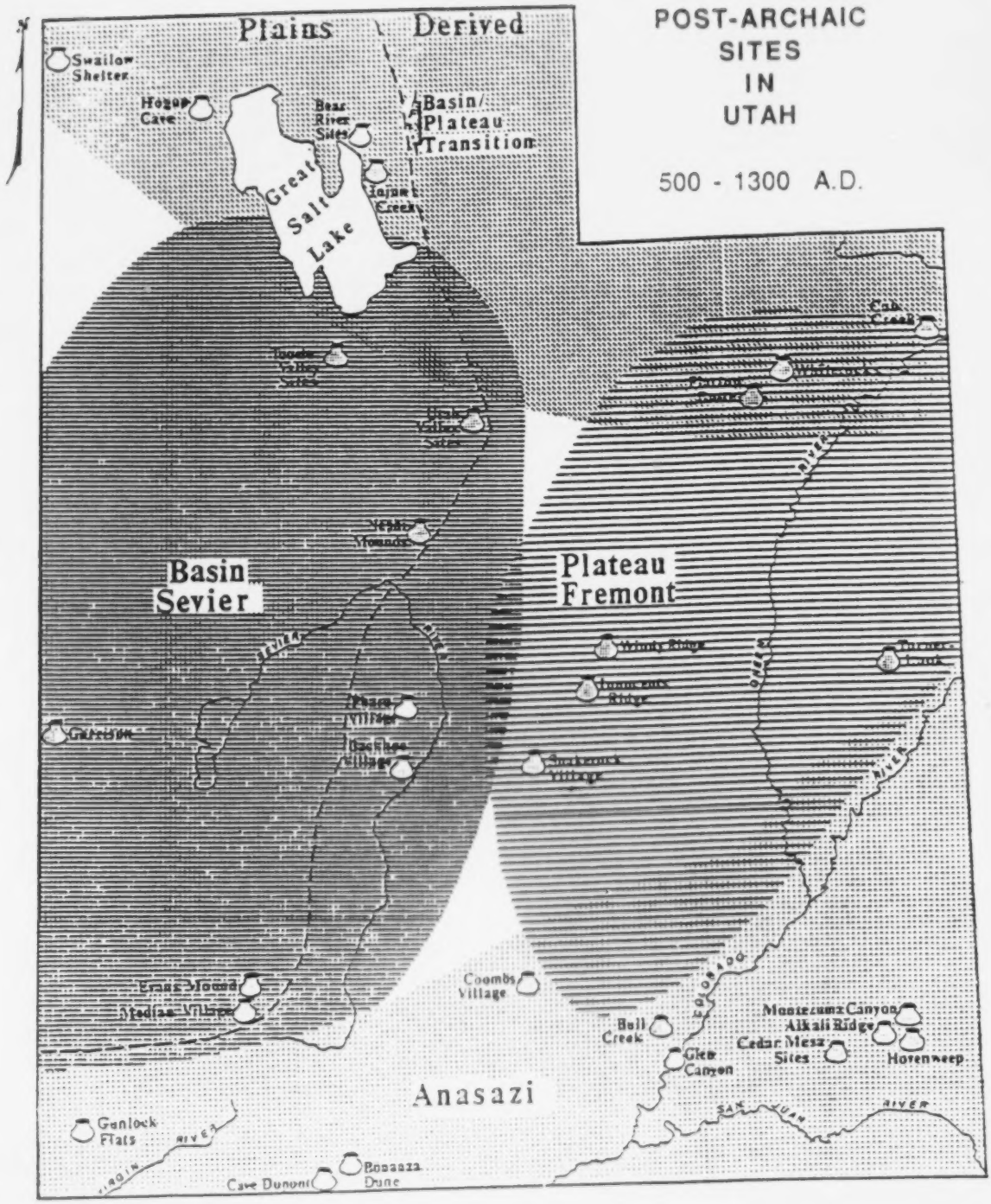

POST-ARCHAIC
SITES
IN
UTAH
500 - 1300 A.D.
Plains
Derived
Basin/
Plateau
Transition
Swallow
Shelter
Hogup
Cave
Bear
River
Sites
Great
Salt
Lake
Promontory
Point
Village
Site
Basin
Sevier
Plateau
Fremont
Gatecliff
Evans Mound
Median Village
Coombs
Village
Bull
Creek
Glen
Canyon
Anasazi
Ganlock
Flats
Cave Dunoni
Bonanza
Dune
Montezuma Canyon
Alkali Ridge
Cedar Mesa
Sites
Horenneep
SAN JUAN
RIVER

Pueblo III Anasazi - 1,100 AD to 1,275 AD

This period is characterized by the large apartment (two storied) dwellings such as the Cliff Palace at Mesa Verde in southwestern Colorado. Generally, the people of the period (by 1150 AD) clustered together in much larger, but fewer sites. Archeologists are still unsure if the numbers of people were fewer than in the previous period. Rock shelters still seem to have been the favored place to live because they provided better protection from the weather. Actually, most of the sites in Utah remained fairly small, consisting of one or two kivas and as many as eight or so masonry rooms. Apartment style houses were ordinarily found only in the rock shelters. Many Pueblo III sites are found on the edges of the mesas overlooking the canyons. This is probably where they planted their corn. They, of course, would have wanted to live near their corn fields making it easier to watch over and to take care of them. In addition to planting corn, beans, and squash, they raised turkeys. The people also obtained cotton for weaving. Sandals, twine, and rope were made from yucca or soap weed. They continued to make corrugated and black-on-white pottery; however, this pottery was much more finely painted than that of the previous period.

Around 1,275 AD the Anasazi left Utah and Colorado, probably moving southward into Arizona and New Mexico. The modern Hopi, Zuni, and the Pueblos along the Rio Grande River are the descendents of the Anasazi. Archeologists are uncertain why the Anasazi left Utah, although it is likely that they left because of crop failure. There is some evidence that after about 1,150 AD many summers were without rain from storms which originated in the Gulf of Mexico and off southern California. Because the Anasazi did not practice irrigation, many years occurred in which they had few successful crops. This may be why they attempted to turn, on a large scale, to raising turkeys. They, no doubt, continued to raise some crops, raised turkeys, hunted wild game, and gathered wild plant food, but apparently this was not enough to sustain them. It has also been suggested that with some years of possible famine, people turned against each other, maybe trying to steal one another's food. Social disorder may have contributed to their leaving.

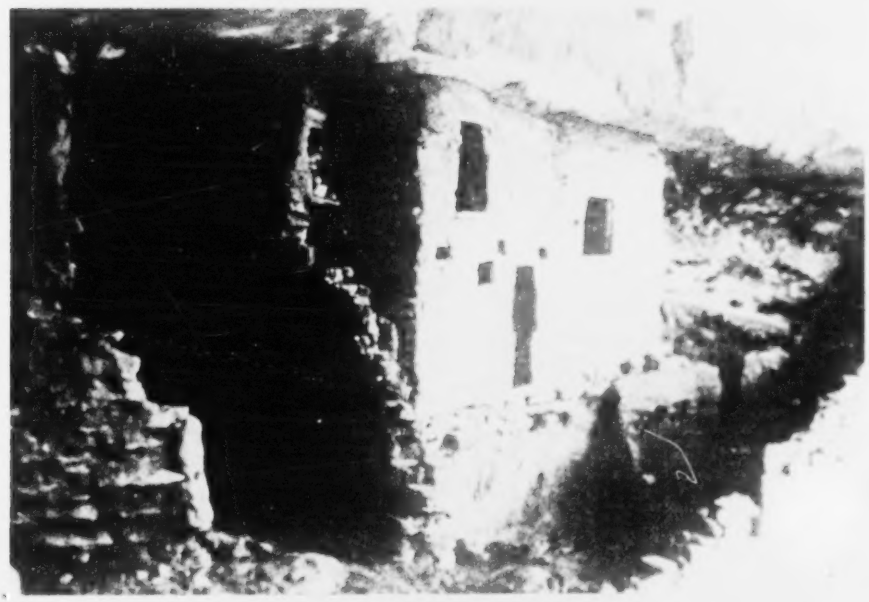
Fremont - 500 AD to 12-1300 AD

North and west of the Colorado River, Archaic man continued his development and by 500 AD the transition to the Formative Fremont culture occurred. This is primarily based on the appearance of pottery and corn in these more northerly Utah sites. The Fremont are divided into five different groups. The Great Salt Lake, Parowan, and Sevier are located on the drainages of the Great Basin. The Uinta and San Rafael to the east are located on the Colorado Plateau. This discussion will deal primarily with all Fremont people and the ways in which they were basically alike.

The Fremont are, in some ways, similar to the Anasazi and it is thought by some that they may have even been related; however, we don't really know if they even spoke the same language. They did live at the same time, and it is obvious that they were aware of each other because the Fremont who lived nearest the Anasazi were, in some ways, more nearly like the Anasazi.

At the beginning of the period, the Fremont were still hunters of wild game and gatherers of nuts, seeds, and plants. Eventually they began to plant crops, probably obtained from the Anasazi, and to live in larger settlements. They raised corn, beans, and squash. All Fremont everywhere probably did some farming, but those that lived near rivers and marshes also used

This is a typical Pueblo III, Anasazi, Mesa Verde dwelling. It contains kivas and both living and storage rooms.



This is Westwater Five Kiva ruin west of Blanding, Utah. It clearly shows the stone masonry and the details of both the door and the windows.

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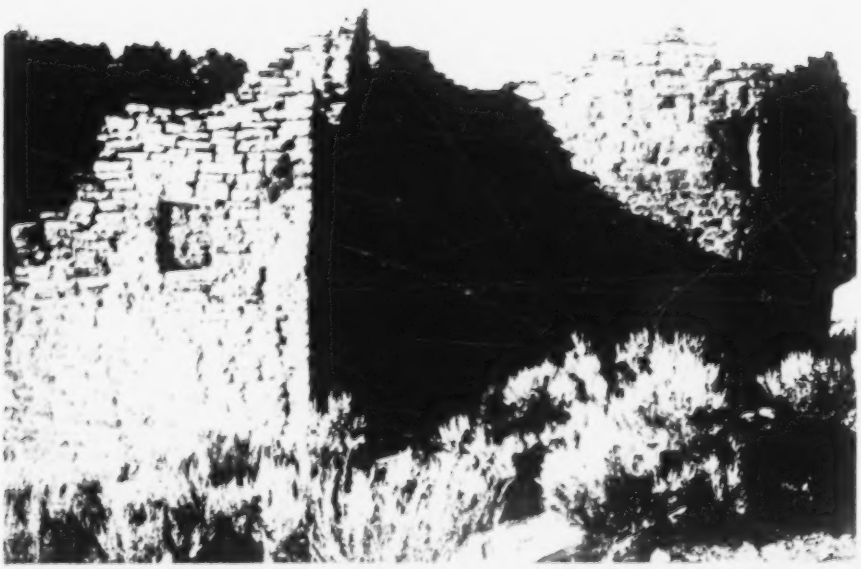
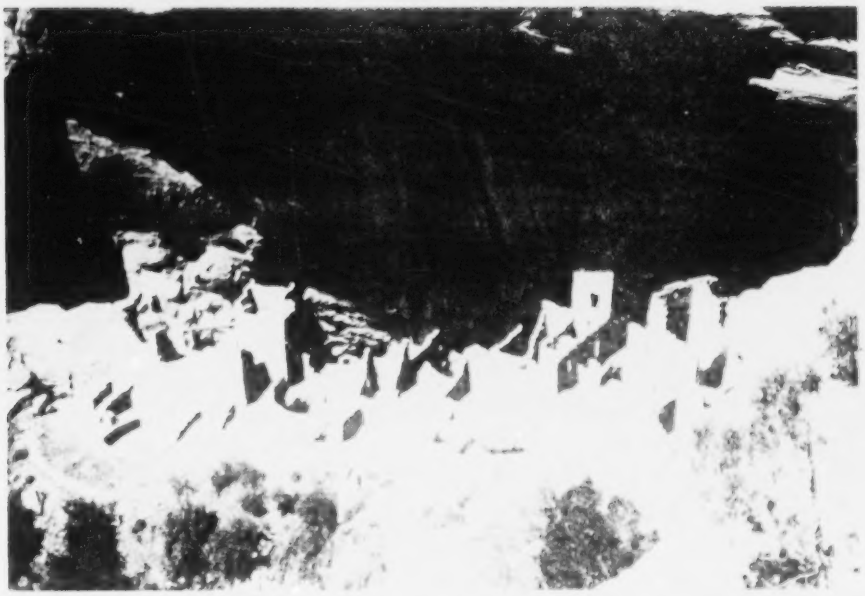
This is a floor plan or map of a typical Anasazi Pueblo III cliff dwelling. Can you identify the kivas?



This is part of a building at Hovenweep in the southeast corner of Utah.



You are looking down on Square Tower ruin at Mesa Verde in Colorado. It is a Pueblo III cliff dwelling.

Spruce Tree House is a beautiful cliff dwelling in Mesa Verde. It is a Pueblo III cliff dwelling.

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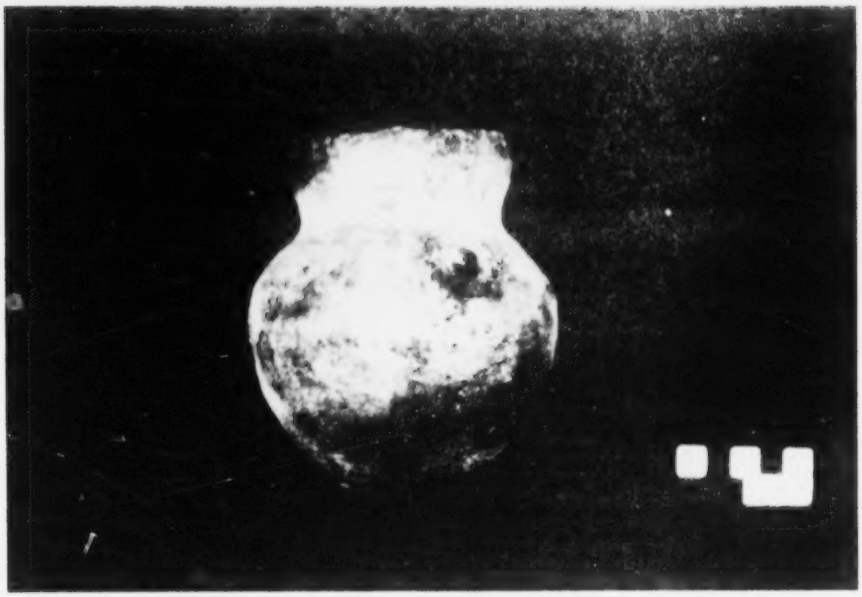
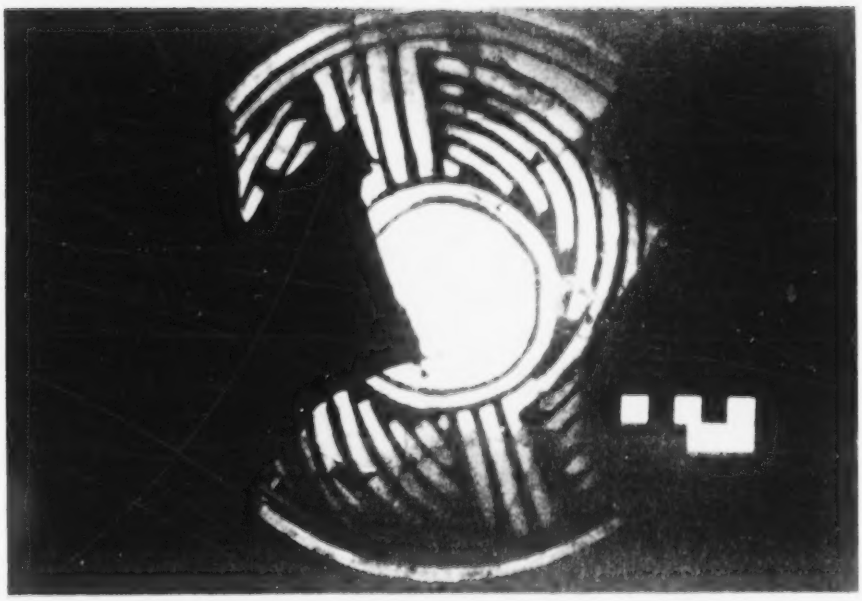
the plants and wild life, including waterfowl, that lived there. Those that lived in drier areas and in the higher valleys, probably to some extent, had to hunt for deer, bison, and mountain sheep to add to their diet.

The Fremont, as all other Native American Indians, used their environment to gain subsistence and to improve their lifestyle. The clay was gathered locally to make gray pottery. This pottery, although quite plain and for the most part undecorated, was well made. Their dwellings were known as pit houses. They were constructed by digging a circular, square, or rectangular pit partially into the ground. Posts were widely spaced around the edge to form the walls. Several large posts were set in the floor in the interior to support the roof. The roof and walls were covered with brush and were in turn covered with mud. The mud would bake dry in the hot sun and turn nearly like adobe. Fremont pit houses were much like the Baskemaker III or Pueblo I houses of the Anasazi. The Fremont did not build kivas. Fremont pit houses are generally found in small groups of two or three; however, several large sites have been excavated containing many houses some of which were abandoned and others were built to live in, possibly when someone died. This might, in part, account for the large number of houses at any one site. The Fremont also built small mud and stone storage structures or granaries which were tightly sealed to keep out rodents. Rodents must have been a constant threat to food supply of the Fremont. The granaries were usually quite small and were sometimes built near where they lived but, sometimes, they were located quite far away. Those located far away were probably near the Fremont had their corn fields or where they gathered wild plant foods. One can see such isolated storage structures on ledges high up on the canyon walls along the Green River and elsewhere.

In addition to their pottery, the Fremont are identified by their baskets, clay figurines of both man and other animals, a particular type of metate or grinding stone, and unique sandals. They made arrow points called Rose Springs Corner-notched points for use with the bow and arrow.



Fremont typically made plain gray pottery. This is a seed pot excavated near Richfield, Utah.



The Fremont did make some decorated pottery. This is a fragment from a bowl.

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Three village sites, Median and Nawthis villages and Five Finger Ridge, best characterize the Fremont. They are all large sites but each showes a peculiar difference. Each has been extensively excavated and dated and each has been especially important to our understanding of the Fremont of the Great Basin.

Median Village is a large mound in the Parowan Valley north of Cedar City. This Fremont site contained many pits over a small area. Refuse piles called middens became the basis for construction of new houses. In addition new pit houses were sometimes partially layered over former pit houses. Because of the layering of houses, it was quite easy for archaeologists to reconstruct the sequence of events there. Median Village was only occupied for about 200 years.

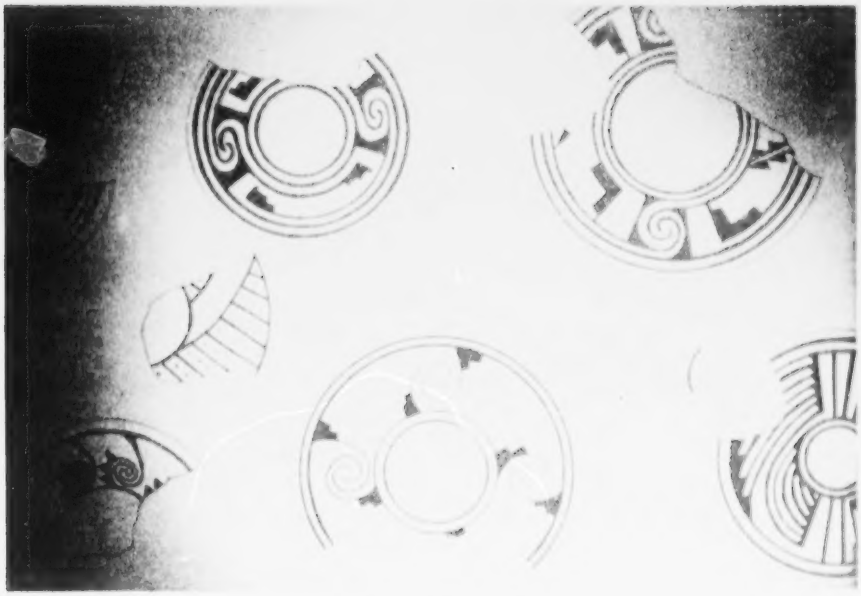
Nawthis Village is a Fremont site east of Richfield, Utah. Nawthis was distinctively different from Median Village in that it contained a large number of small mounds over a large area. Each mound contained several pit houses as well as granaries for storage. This village was unusual in that it contained a large number of structures, as well as that it was built at an elevation of nearly 7,000 feet. This is a very high elevation for farming to take place successfully. The fact is that the growing season at that elevation is normally too short for corn to mature. But farm they did, and successfully. It is thought that warm air currents must have passed through the valley extending the growing season. In addition there also must have been a favorable moisture (rain) supply. This site reflects a people who were adapted to the environment, as their occupation lasted about 1000 years.

Five Fingers Ridge is in Clear Creek Canyon south of Richfield, Utah. This large Fremont village was built on a knoll and contained many pit houses and granaries. Like Nawthis, Five Fingers was occupied during almost the whole Fremont period. It is the largest Fremont site in terms of living structures and granaries, excavated to date (1987). It is located in a very favorable location for agriculture, for collecting wild plants, and for hunting game. We can guess that these Fremont people were also well adapted to their environment and a successful people.

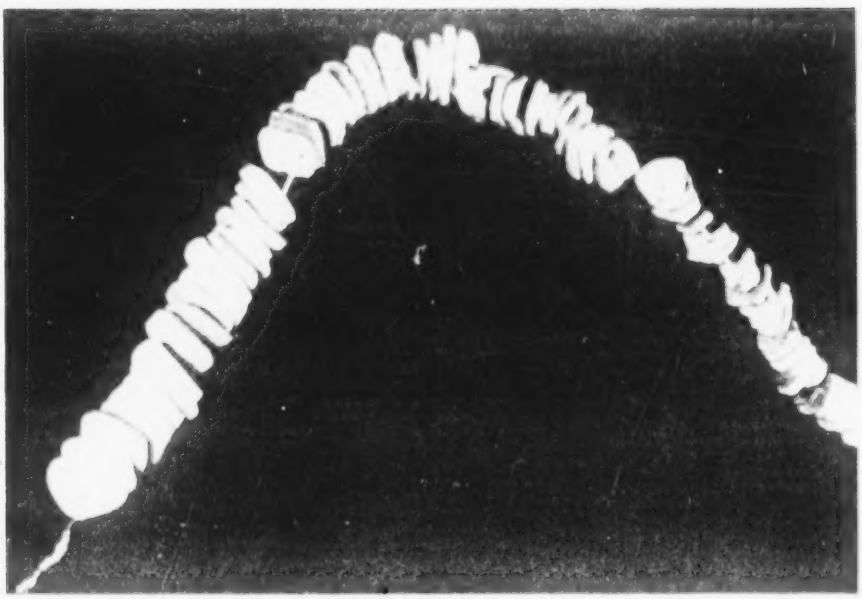
Fremont and Anasazi Abandonment of Utah

By 1,300 AD, Fremont people in Utah abandoned their homes. Why should a culture that seems so well adapted to its environment suddenly disappear? The answers are not clear. They did leave about the same time as the Anasazi. Can we assume the same conditions affected both the Fremont and the Anasazi? We have many questions that we can ask, but unfortunately we do not have the answers. We do have some ideas, but these need to be studied more fully.

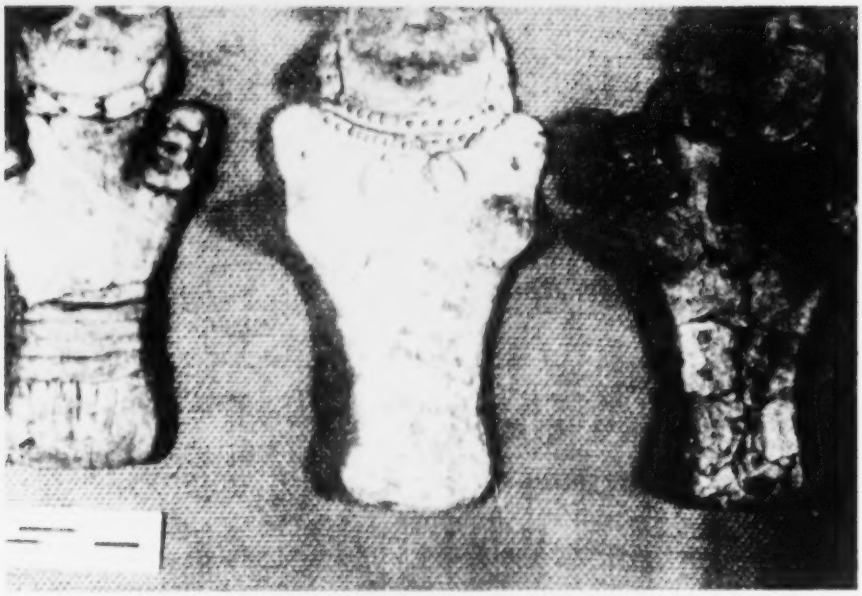
The first question one can ask is what did the Fremont and the Anasazi have in common. You should answer that both were, to some degree or another, farming people. We, today, know how crops are affected by the weather and that great changes in the weather can affect crop production. One theory about why the Fremont and the Anasazi abandoned Utah suggests that the climate underwent considerable change beginning about 1,150 AD. Tree growth rings of pine trees during this time in southern Utah and Colorado become narrower, which suggests that there was a great reduction in summer rainfall. Such changes in the climate during the period following 1150 AD might have resulted in crop failure. The crops that were produced were smaller in number as well as in size. Think what this might have meant to a family who had to eat the corn they produced to stay alive. What would they then do for seed to plant next year? A drier summer climate would also affect the wild plants in the same way. These wild plants were



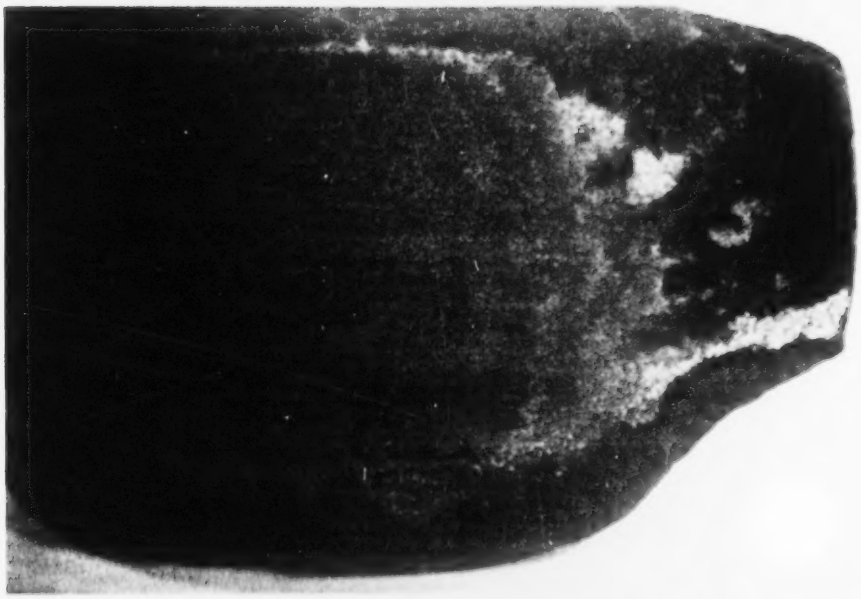
These designs are taken from black on white Fremont pottery



These are bone beads on a necklace. Shell was also used



The Fremont are known for their clay figurines. They may have been used in fertility or corn growth rates.



The typical Fremont metate grinding slab was hollowed out leaving a narrow shelf around the top. Corn and seeds were ground upon it.

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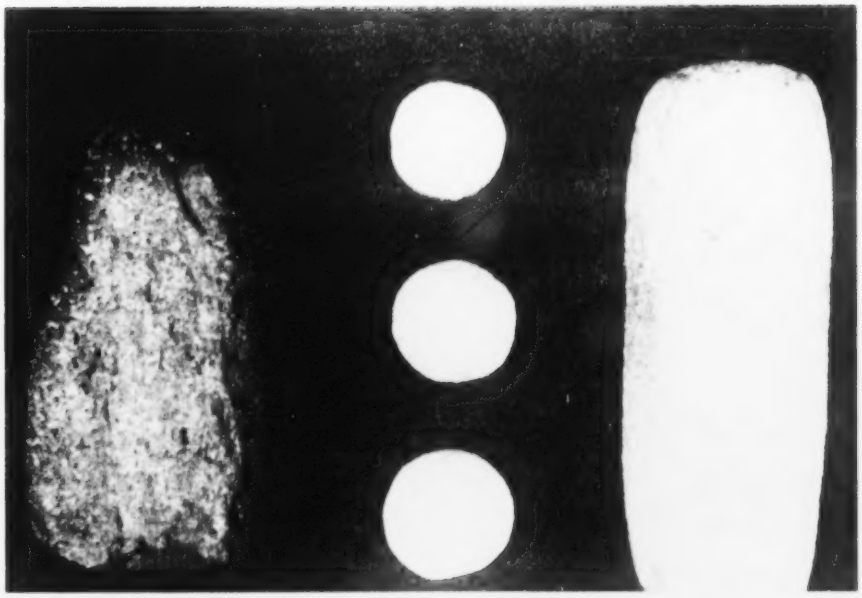

The two longer stones are manos used as grinders of corn or seed on metates. The use of the three round stones is unknown.

both food supply for Man and the animals he ate. It would not take many dry years to affect both Man and the animals he hunted. Food would then be in short supply.

This same dry land may have been overused. The Fremont and Anasazi did not know that you could wear out the land. They may not have known about the use of fertilizers or the rotation of crops - that is planting different crops in a field from year to year. Combine the summer droughts and tired soils, and you may begin to see part of a picture of a changing and increasingly difficult environment. Because summer rainfall originates from the south in the Gulf of Mexico, the people who abandoned Utah probably traveled southward in order to find the summer rainfall.

There are other reasons that might have caused the Fremont and Anasazi to leave their homes. Maybe their populations increased until the land could not support so many people. Maybe more aggressive warlike tribes arrived on the scene forcing the Fremont and Anasazi to leave. Maybe the newly arrived people merely absorbed the local people. Maybe they left due to a combination of reasons.

Rock Art

The Fremont and the Anasazi left marvelous rock art to record their presence. Both made petroglyphs that are pecked in the rock. Both made pictographs which are painted on rock. Both liked to record mountain sheep, human figures, and geometrical designs. The typical Fremont rock art shows larger than life size human figures called anthropomorphs. They have large heads, broad shoulders, with a much smaller hip area narrowing to form a trapezoidal figure. The figures are decorated with necklaces and fancy headgear. Sometimes they carry shields. Large anthropomorphic human figures that are painted instead of pecked are sometimes referred to as Barrier Canyon Style paintings. Rock art representing animals are referred to as zoomorphic creatures.

The Desert Bighorn Sheep and a hunter is a petroglyph. The sheep were favorite subjects of many "rock artists"

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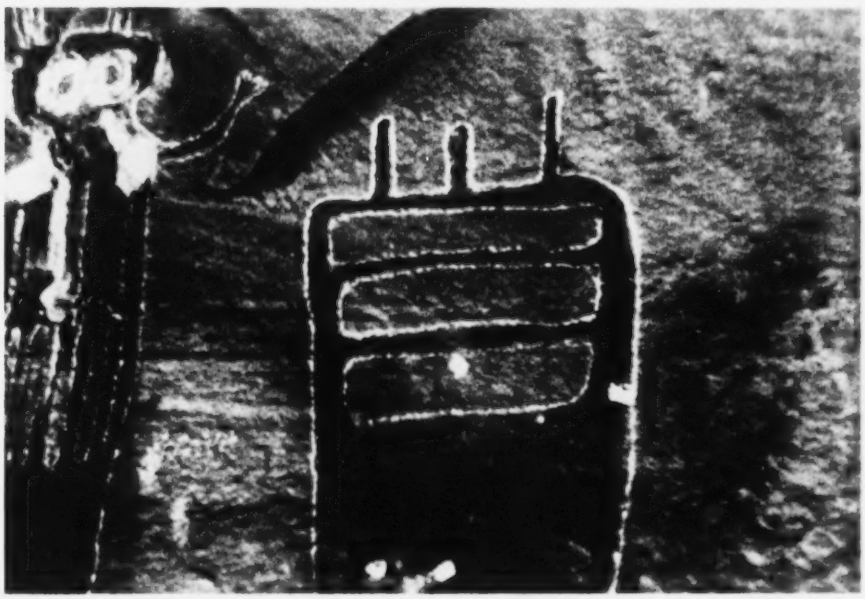
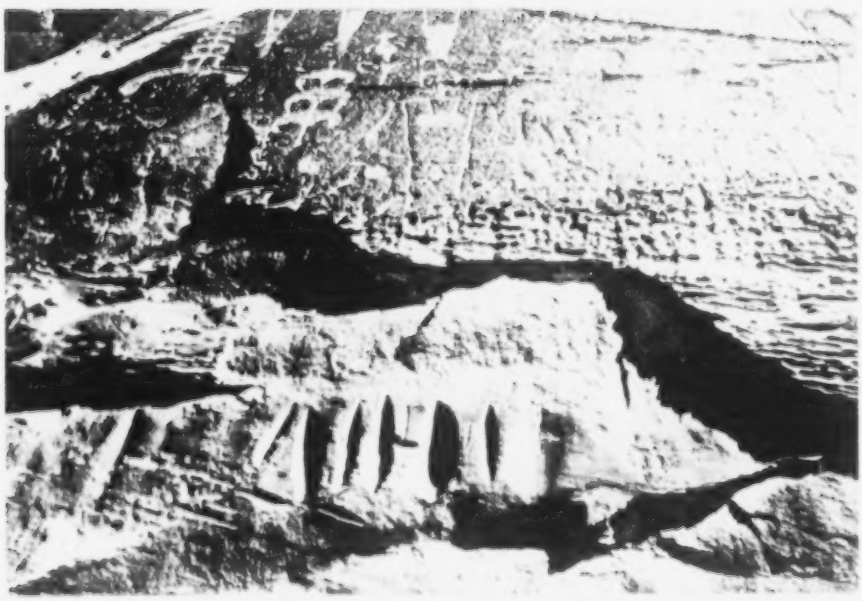
Some rock art is very old. You can tell which art is older because the petroglyphs become more difficult to see. Erosion or weather wear away at them decreasing their visibility. The rock art also becomes painted with a "desert varnish" (magnesium), which is a black chemical that oozes out of the earth, giving the rock the same overall appearance. The petroglyphs become colored as they were before they were pecked, making them very difficult to see. Utah is known for its wonderful rock art.



These are anthropomorphic pictographs showing man like figures.

The hand prints are pictographs and are located on the back wall of a shelter.



This petroglyph is located on the San Juan River near Bluff, Utah. Notice the trapezoidal figure at the upper center with the necklace and large head dress. The indentation or vertical slits on the rock are where man sharpened his tools.

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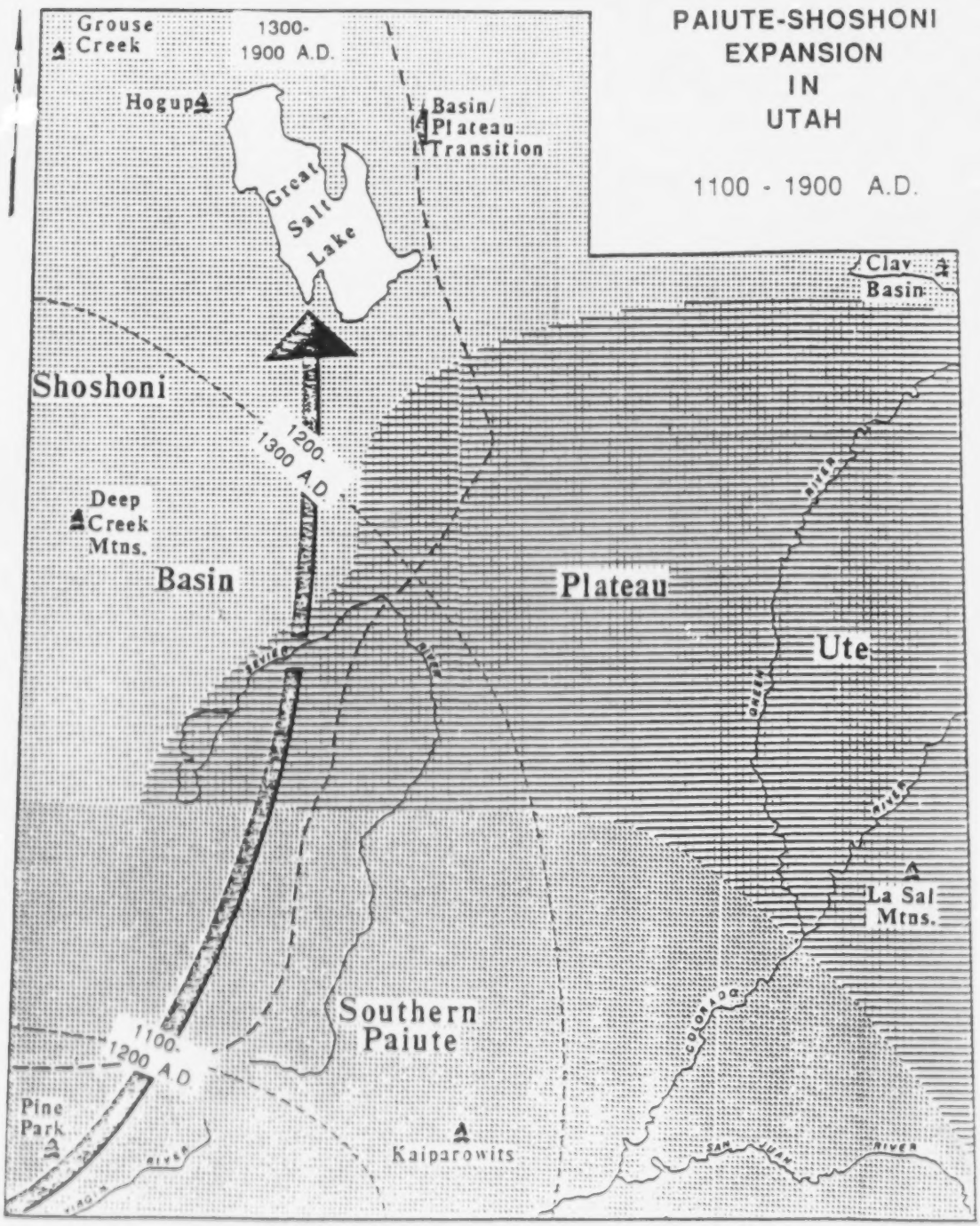

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The All American Man is a pictograph in a cave in Canyonlands near Moab, Utah.

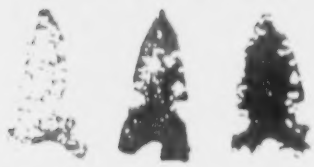
Numic Tribes - Paiute, Gosiute, Shoshone - 1100 to 1300 AD

During the time of the Anasazi and Fremont development, the Numic Tribes lived in southern California and western Nevada, possibly in a lake and marshland environment - the remnants of Lake Lahontan. The weather warmed and the marshlands dried up. With the adequate food supply gone, it was necessary for these people to look for a more favorable environment in which to live. They moved out. Numic groups moved through Nevada and into Utah, becoming the Paiute, Gosiute, Ute, and Shoshone. They arrived between 1100 and 1300 AD, during the time when the Fremont and the Anasazi were still residents of the Utah area. These are some suggestions of encounters between the groups in southwestern Utah and southwestern Nevada. This interaction would have been recorded in Coves where they lived. Unfortunately all the caves so far discovered have been disturbed by people looking for artifacts - "looters" and the information has been lost for all time.

The Paiute, Gosiute, Shoshone tribes, collectively known as the Numic Tribes, settled in the Great Basin. They were nomadic hunters and gatherers, similar to man during the Archaic. They shot with a bow and arrow and used the small Desert Side-notched point. They hunted deer, jack rabbits, antelope, squirrels, and rodents. Because the Great Basin did not provide a bountiful supply of food, the people tended to live in small clans. One area simply could not support a great number of people. The groups would gather to hunt, to find mates, and for ceremonies. When they gathered together, they hunted together and they drove the prey - rabbits, antelope, etc. - into box canyons, nets or "corrals". They also depended heavily upon plants and nuts, particularly pinon. They followed the maturing and ripening of wild plants and nuts from locale to locale to supplement the meat supply.

The shoshone speaking people are shown using fire to drive and capture horses.

DESERT SIDE-NOTCHED



The Shoshone speaking people used the Desert side-notch arrow head on their bow and arrows.

They made sandals and beautiful baskets which they used to carry and to winnow the seeds. They used the mano and the metate to make flour or meal out of the seeds. They adapted and used the environment very effectively.

They eventually learned how to make a crude, tan-to-brown pottery. A few learned to farm (probably from the Anasazi), but basically they stayed hunters and gatherers. They lived in "wikiups", but because they were made out of wood poles, and brush, few have survived the passage of time.

Information about the Numic Tribes has been studied in recent years because these tribes survive today. They remember from times past early in this century as well as what they still do in the tribes today.

Athapascan Tribes - Navaho, Apache - 1500 AD

The Navaho and Apache were late arrivals in the Utah area, for they did not arrive until after 1,500 AD. The Anasazi and Fremont were gone from the Utah area before their arrival. Little is known about these people before they came to Utah. It is known that the Navaho and the Apache share a related language - Athapascan - and that they came either from the North in Canada or from the Great Lakes area in the northeastern United States. When they arrived in the Southwest, they were basically a peaceful people. They moved into a largely unpopulated area and easily adapted to their new desert environment. As they came in contact with the resident Pueblo people, they borrowed heavily from their culture. From them they learned to plant and to weave. They also acquired some of the elements of their religion. When they obtained the horse, a change took place. They became a menace to their neighbors, because they raided the Pueblos for both food and women.

The Navahos lived in small groups of two or three hogans. The hogan originally was a teepee shaped dwelling made of sticks and branches. The firepits were outside with a ramada near for shade. The door, then as now, alway faced east and the rising sun. They also made circular dwellings made of stone. Today, you see the typical hexagonal or octagonal hogan made of logs. Near each settlement, there will be a sweat house.

Today the Navaho are a pastoral people who tend sheep. The women spin yarn and weave beautiful wool rugs. Both men and women make beautiful turquoise jewelry set in silver. The Navaho learned to make the jewelry in the 1900's from the Spanish. They are currently the fastest growing tribe in the United States.

You have read in detail about the prehistory of Utah. You will increase your learning by doing the activities which are included in this unit. If possible, read additional information available to you in your library. Enrich your life by visiting the Indian sites that are open and available to you in the Southwest. A detailed list is included in the end of the unit.

DENTROCRONOLOGY

One of the methods of dating ruins is dentrocronology. A.E. Douglas discovered that a breed of trees records the same tree ring growth pattern over the same time period for a particular area. The tree rings record weather conditions. The small narrow rings record a slower growth rate due to a dry period of time. A wider tree ring records a great growth rate due to a wetter period of time. After much time and a great deal of effort, he was able to develop a master tree ring pattern for the Southwest going back hundreds of years. A roof beam from an Indian ruin can now be placed so that the rings match to a section of the master pattern. Since time is dated by the master pattern, it is easy to discover what year a post in an Indian dwelling was cut. The growth patterns also record a continuous story in terms of the weather patterns. This gives archaeologists information to help interpret the living patterns and lifestyle of prehistoric man.

RADIO CARBON DATING

Radio carbon dating is a method of dating archaeological sites. This method is not as accurate as tree ring dating - dentrocronology; however, it can obtain dates from tens of thousands of years ago as compared to tree ring dating which is limited to thousands of years ago.

Radio carbon dating can be done on small bits of charcoal or other dead materials. The dating is done on the basis of the known period of time it takes to replace the Carbon 14 atom with the Carbon 12 atom upon the death of the living organic material.

CONCLUSION

You have learned a great deal about prehistoric Indian. It is hoped that you have become so interested that you will now search for other books on this subject.

It is also hoped that you have become so proud of Utah's Indian history that you will be always a protector of Indian sites. Some people have used rock art as target practice. Some people have dug up graves, leaving bones scattered here and there. Some people have dug in dwellings for artifacts. These sites are treasures that belong to us all. We must all become "watch dogs" and protect them. You too can become a watch dog. To become one, you must never disturb an Indian site yourself. You must report to your parents at once if you should see someone else hurting a site. Your parents should then report what is happening to the nearest authorities.

Remember that a site looted is a treasure lost forever.

PREHISTORY OF UTAH

STUDENT'S NAME _____ CLASS _____

The story of Utah's prehistory is slowly unfolding under the careful hands of archaeologists. It was an exciting time filled with dangers and hazards. It necessitated that man must adapt to survive in an ever-changing environment.

As you complete these activities, evaluate man, his strengths and talents, and his ability to cope with a difficult and changing environment.

To answer the questions, you must select a particular time period or a particular developmental stage - Paleo, Archaic, or Formative. The answers to the questions must reflect the environment and lifestyle of the people you choose.

THIS IS YOUR WORK CONTRACT. You will need to complete the required number of activities in each area. After you have completed an activity, take your completed work and your contract to your teacher. Your teacher will evaluate the work with you and will sign your contract when you have successfully completed an activity. These activities are designed to give you training in both Productive Thinking and Talent Development as you learn about early man and his development through time.

Grading Procedure: 485 = A 385 = C
435 = B 335 = D

ACTIVITY I
Research and Vocabulary

_____ _____

All students must complete both the Research and the Vocabulary

ACTIVITY II
Creativity

_____ _____

Choose two activities

ACTIVITY III
Communications

_____ _____

Choose two activities

ACTIVITY IV
Planning

_____ _____

Choose two activities

ACTIVITY V
Decision Making and Evaluation

_____ _____ _____

Choose three activities

ACTIVITY VI
Forecasting

_____ _____

Choose two activities

Your Point Total _____

PRE-HISTORY OF UTAH

A Unit for Independent Study

By Mary Ann Zimmerman
Bella Vista School, Jordan School District

ACADEMIC OBJECTIVES: Each Student will be able to identify the three stages of development of the Indian.

Each student will be able to identify the tools representing each stage of development.

Each student will be able to identify the environmental factors that affected each stage of development.

Each student will develop an understanding of Indian life and how his developments improved his lifestyle.

** Hopefully each student will develop an appreciation of prehistoric man which will be manifested in his own respect for and protection of any prehistoric site.

PRODUCTIVE THINKING OBJECTIVES: Students will use divergent thinking, convergent thinking, and evaluative thinking skills as they solve various problems as listed in the individual activities.

TALENT DEVELOPMENT SKILLS: The students will demonstrate their abilities in the various talent areas upon completion of specified projects.

UNIT DESIGN

This unit is designed as an independent study unit. It is designed to lead a student through research, productive thinking, and talent development in the study of prehistoric man.

Included in the unit are copies of (1) the studer.t contract, (2) Activity I, Research and Vocabulary, (3) Activity II, Creativity, (4) Activity III, Communications, (5) Activity IV, Planning, (6) Activity V, Decision Making and Evaluation, (7) Activity VI, Forecasting.

ACTIVITY I

RESEARCH AND VOCABULARY

Everyone do both the vocabulary and the research activity.

VOCABULARY

Write each word; give its phonetic spelling; write the meaning; then use each word in a sentence.

1. archaeology (ist)
2. anthropology (ist)
3. palentology
4. prehistory
5. culture
6. environment
7. Pleistocene
8. Holocene
9. Beringia
10. tundra
11. megafauna
12. Paleoindian
13. Archaic
14. adapt - adaption
15. excavate - excavation
16. extinct - extinction
17. domesticate-domestication
18. midden
19. drought
20. recede
21. petroglyph
22. pictograph
23. anthropomorph
24. zoomorph
25. trapazoid
26. magnesium
27. desert-varnish
28. figurine
29. forage
30. habitat
31. ventilate-ventilation
32. pithouse
33. Dentrocronology
34. alcove
35. nomad

Completed Activity . . . 50 Points

RESEARCH

Choose one of the subjects listed below. Find additional information from as many sources as possible. Write a note card from each source. From these notes, make at least a one-page report. Be sure to put the report in your <u>OWN</u> words.

1. Wisconsin Ice Age
2. Pleistocene Period
3. Holocene Period
4. Beringia
5. Lake Bonneville
6. Ice age animals - megafauna
7. Paleoindian
8 Archaic Man
9. Formative Man
10. Anasazi
11. Fremont
12. Hohokam
13. Magallon
14. Navaho (Navajo)
15. Shoshone (Shoshoni)
16. Gosiute
17. Paiute
18. Ute
19. Pueblo Indians
20. Hopi Indians
21. Zuni Indians
22. Domestication of Animals
23. Pottery and/or Baskets
24. Stone Tool Knapping
25. Plant Use by Indians
26. Rock Art in Utah
27. Indian Dwellings
28. Danger Cave
29. Hogup Cave
30. Cowboy Cave
31. Fremont Village

Completed Activity . . . 50 Points

ACTIVITY II

CREATIVITY

Choose two activities:

1. Draw a picture. Draw a picture of the countryside, showing the environment where either Paleo, Archaic, or Formative man lived.

   Completed Activity . . . 25 Points

2. Draw a picture. Draw a picture showing one or several Magafauna animals placing them in their proper environment.

   Completed Activity . . . 25 Points

3. Draw a picture. Draw a picture of at least five spear and/or arrow points labeling each. List the main animals that were the target of each point.

   Completed Activity . . . 35 Points

4. Draw the view. Pretend you are an Anasazi living in a cliff dwelling in a canyon in Southern Utah. Draw the view from your dwelling.

   Completed Activity . . . 25 Points

5. Draw three designs. You are an Anasazi. Make three different designs. Decide on what you would put each design. Then draw the designs on whatever you selected.

   Completed Activity . . . 30 Points

6. Draw a design. Choose one:

   a. To put on a bowl, mug, or olla.
   b. That would be outstanding on a rug.
   c. That would be suitable for a sandpainting.
   d. That would be appropriate for a buffalo hide.
   e. That would be suitable for stone or pebble carving.

   Completed Activity . . . 20 Points

7. Draw a rock art panel. You could be Paleo, Archaic, Anasazi, or Fremont. What message would you like to communicate? Draw a rock art panel with at least 5 figures and label it either a petroglyph or pictograph.

   Completed Activity . . . 25 Points

8. Draw dwellings. Draw in detail a pithouse, cliff dwelling, or wikiup.

   Completed Activity . . . 20 Points

9. Draw figurines. The Fremont made clay figurines representing the male, female, child, and animal. Draw each in detail. These figurines could also be made out of clay like the original ones.

Completed Activity . . . 30 Points

10. Draw the hunt. Draw a scene that records a great hunt showing the atlatl in use.

Completed Activity . . . 25 Points

11. Make pottery. Pretend you are an Indian potter. Make a pot out of clay with a particular function in mind. If you are Anasazi, you may wish to paint a design on it or in it.

Completed Activity . . . 30-50 Points

12. Make corregated pottery. Roll clay between your hands forming a pencil thin rope. Form a pot by coiling the rope in a circular motion pinching the clay together as you go.

Completed Activity . . . 40 Points

13. Make up a game. List things in nature that might be useful as playthings. Use some of the items from this list to make up a game for children and/or adults to play.

Completed Activity . . . 30 Points

14. Weave a basket. Weave a basket using available materials. Use either the coil or twine method.

Completed Activity . . . 30-80 Points

15. Weave sandals. Research how Indians made sandals. Weave sandals using available materials.

Completed Activity . . . 30-50 Points

16. Make jewelry. Make a necklace out of shells, feathers, leather, or seeds. Use any material that would have been available to an Indian.

Completed Activity . . . 30 Points

17. Write a poem. Pretend you are a particular Indian from a selected time frame. Choose one of the following and write a poem:

    a. About your trip across Beringia.
    b. On your feeling about the passage of the seasons.
    c. Your daily fears; your fears of tomorrow; your hopes.
    d. Your life following the herds.
    e. Your life as a hunter.
    f. As a parent watching your children develop.
    g. As a parent sharing with your children the stories of the past.
    h. As a parent instructing your children in the culture of the tribe.
    i. As a wise elder remembering the past.
    j. As an elder preparing for the hereafter.

Completed Activity . . . 30-50 Points

18. Compose a song. Pretending you are a particular Indian from a selected time frame, choose one and write a song or chant:

    a. For the hunter to sing, either before, during, or after the hunt.
    b. For the fighter to sing, either before, during, or after winning or losing a battle.
    c. For the medicine man to help him drive out the evil spirits.
    d. For the clan to sing to celebrate.
    e. For the mother to sing to soothe the baby.
    f. For you to relate your feelings about nature.
    g. For you to relate your feelings about coyote, wolf, bear, eagle, etc.
    h. To insure your success while making baskets, pottery, points, blankets, etc.
    i. To remember your edible pet - the turkey.
    j. To protect the cave, pithouse, or cliff dwelling.
    k. To insure proper weather for planting successful crops, abundant game, etc.

Completed Activity . . . 30-50 Points

19. Make a diorama. Choose a particular time frame or a particular Indian. Make a diarama showing:

    a. Life in a cave, pithouse, or cliff dwelling.
    b. Man as the hunter.
    c. Indian involved in a craft - potter, arrow, knapper, weaver, etc.
    d. Environment with animals.
    e. People involved in ceremony.
    f. A battle of man against animal or man against man.

Completed Activity . . . 20-50 Points

20. Make a musical instrument. List the materials available to man to make musical instruments. Evaluate how you would produce sounds from the items on your list. Select one and make a musical instrument of the materials available.

Completed Activity . . . 20-50 Points

21. Make puppets. Make appropriate puppets to act out any of your stories, plays, fables or poems which you have written either under Creativity or Communications.

Completed Activity . . . 20-50 Points

22. Make an atlatl. Do research on how the Indian made the atlatl. Then make one.

Completed Activity . . . 30-50 Points

23. Decorate with Indian design. Make an appropriate Indian design and decorate one of the following:

a. stationery
b. place mats
c. towels
d. pot holders
e. pillows (decorator)
f. calendar

24. Make a design. Draw a picture of a petroglyph and paint it on the spare tire cover of your family's RV or four wheel drive.

Completed Activity. . . 30 Points (if just drawn)
60 Points (if applied)

ACTIVITY III

COMMUNICATIONS

Choose two activities:

1. Draw a petroglyph or pictograph. List at least five ideas you might want to communicate to someone. Select two ideas, then express them as a picture. If you paint your picture, it would be a pictograph; if pecked, a petroglyph.

   Completed Activity . . . 20-40 Points

2. Write a story. Select one of the following and write in the first person:

   a. Your experiences crossing Beringia.
   b. Your first hunting adventure.
   c. What it is like to survive in the winter.
   d. Your day-to-day experiences.
   e. What goes on in the kiva.
   f. What it was like crossing the desert with little water.
   g. The things in nature that you enjoy.
   h. Hunting in the marshlands.
   i. A day in the sweat house.
   j. A day gathering plants, berries, and nuts.

   Completed Activity . . . 20-70 Points

3. Write a fable. Select one of the following and write a story that is part of your Indian folklore:

   a. Where your clan came from.
   b. How the coyote, eagle, owl, etc., became your friend.
   c. How your clan received its name. (Example: Bear Clan)
   d. The meaning of the rainbow.
   e. How the changing of the seasons occurs.
   f. Why the sun rises in the East.

   Completed Activity . . . 20-70 Points

4. Write a story. Pretend you are an Indian from a particular time frame. Describe your life, feelings, and adventures. Make this time period and stage of development come to life by making us see, hear, taste, feel, and smell your environment.

   Completed Activity . . . 30-50 Points

5. Draw a filmstrip. List the important environmental conditions, the animals they hunted, and the tools that are associated with each stage of development of Paleoindian, Archaic, and Formative man. Evaluate your choices carefully. From your list draw as many pictures as necessary. Be sure to record your ideas in sequential order. Each picture should have one or two sentences of explanation and should relate the History of Man in Utah.

Completed Activity . . . 50-100 Points

6. Make a picture history book. Proceed with the same directions given for the filmstrip. Instead of a one or two sentence explanation, paragraphs must be written to include greater detail. You will want a title page, Table of contents, Glossary, information on the author or authors, and whatever information you deem is needed to make the book excellent.

Completed Activity . . . 50-150 Points

7. Write a play. Select a time frame and a specific group of people from a particular environment. Now write a play and involve your cast of characters in an exciting adventure. Enlist your friends to help you present your play. This could also be done as a puppet show.

Completed Activity . . . 50-150 Points

8. TV Newscast: You are there. Go back in history to the years of your choice. Tell about some of the following:

   a. Events leading to change.
   b. The changes that took place.
   c. The results of the changes.
   d. Events or inventions that were monumental or crucial to change.
   e. New weapons and hunting methods.
   f. New foods.
   g. New inventions - basketry, pottery, etc.

Completed Activity . . . 50-150 Points

9. Write bumper stickers. Write four bumper stickers, each with a different slogan to encourage people to protect Native American rock art or resident sites.

Completed Activity . . . 20 Points

ACTIVITY IV

PLANNING

Choose two activities:

1. Plan a hunting trip. You are going hunting with three friends. Choose the prey and the weapons. Draw a picture or a map of the environment. In the legend, identify by color or letters the hunters and indicate the movement of each on the map.

   Completed Activity . . . 30 Points

2. Plan a hunting trip. You are going hunting with three friends for a mammoth with spears. The area is marshy. In the legend identify by letters or color the hunters and draw a picture of the environment. Indicate the plan of action for each.

   Completed Activity . . . 30 Points

3. Plan an animal drive. The object of the hunt is to drive a herd of bison over the cliff. Draw a map or picture of the environment. In the legend identify by letters or colors you and three other hunters. Indicate the action to be taken by each.

   Completed Activity . . . 30 Points

4. Change location. You and your parents must move to another location. List your possessions, your food requirements, special needs, if any, and other responsibilities. Assign work load, duties, and responsibilities to each member of your family. You might also place on an outline of Utah the place of your departure, the path of your trip, and the location of your destination.

   Completed Activity . . . 30-80 Points

5. Make floor plan. Indians lived in Utah mainly in four types of dwellings. Choose one and make a floor plan. Place belongings in them.

   a. cave
   b. pithouse
   c. cliff dwelling
   d. wikiup

   Completed Activity . . . 20-30 Points

6. Place on map. Draw or obtain an outline of the state of Utah. In the legend record a symbol for the Fremont and Anasazi. Indicate by symbols the location of settlements for each.

   Completed Activity . . . 30 Points

7. Make a menu. Plan a menu for you and your parents. List foods available in the summer during the time frame in which you lived. From the list select food for a meal that would keep you healthy as well as strong.

Completed Activity . . . 20-30 Points

8. Plan contents of medicine bag. Research plants that were used by Indians for medicinal reasons. List items all well-supplied medicine bags should have had.

Completed Activity . . . 20-40 Points

9. Place on map. Draw or obtain an outline of the state of Utah. In the legend record a symbol for the Numic tribes: Shoshone, Paiute, Gosiute, and Ute. Identify areas of settlement for each tribe.

Completed Activity . . . 30 Points

10. Place on map. Draw or obtain an outline of the state of Utah. In the legend record a symbol for the megafauna found in Utah during the Pleistocene. Place symbols at the location of the sites where their bones have been found.

Completed Activity . . . 30-50 Points

11. Trace a map. Trace a map covering Utah, Colorado, New Mexico, and Arizona. Record on the map the major Indian sites which are either Federal Parks or can be visited by tourists.

Completed Activity . . . 30 Points

12. Plan a trip. Use road maps of Utah, Colorado, New Mexico and Arizona. Plan a trip to visit major Indian sites in the four-state area.

    a. List sites you would visit.
    b. Decide in what order you would visit these sites.
    c. Figure daily distances in order to know where to spend the night.
    d. Allow adequate time to visit each site.
    e. Determine days needed to take the trip.
    f. Estimate cost of each sub-topic:
        1. meals
        2. lodging
        3. gas (Total distances. Figure gas at 20 miles to the gallon at $.94 for a gallon)
    g. Total cost of trip.

The frosting on the cake would be. . . You and your family next summer take the trip you planned. (50 - 100 Points)

Completed Activity . . . 100-150 Points

13. Plan an advertising compaign. Plan a school-wide advertising campaign to increase student awareness of the damage done to Indian sites by "hobbyists", commericial looters, and destructive vandals who wantonly destroy sites by shooting at them, etc. Choose Plan I or II.

Plan I

a. Make a list of each area of communication including bulletin boards, notices, assemblies, etc., that you might use to get your advertising ideas across.
b. Make a plan for each area.

Completed Activity . . . 30-50 Points

Plan II If you want to make a plan and carry it out, it will take several committees of students.

a. Involved students meet as a group and decide on all areas of communication you wish to cover such as bulletin boards, assemblies, school newspaper, etc.
b. Establish common goals, set up a future meeting time to coordinate activities and to evaluate both plans and products produced.
c. Separate into the newly formed committees, make your plans, make job assignments, get busy.
d. Be sure to frequently evaluate what you are dong as a group, as an individual, and always the effectiveness of your product.
e. Upon completing your campaigns be sure to evaluate in your committee as well as a total group as to the quality of your work and the effectiveness of the total compaign.

You've earned many points. You and your teacher must evaluate as to the fair number of points.

Use Previous Plan to:

a. Plan a Native American Week.
b. Plan a week accenting the Prehistory of Utah.
c. Plan several weeks - each week accenting a different Indian or stage of development.

1. Paleo
2. Archaic
3. Formative
   a. Anasazi
   b. Fremont
4. Numic
5. Navaho

You've earned many points. You and your teacher must evaluate as to the fair number of points.

ACTIVITY V

DECISION MAKING AND EVALUATION

Choose three activities:

1. List adaptions. List the adaptions through time that man made which enabled him to survive. Evaluate why each change was necessary for survival.

   Completed Activity . . . 30 Points

2. List changes. List the changes in the environment that caused changes in man's lifestyle. Evaluate how the environment affected man.

   Completed Activity . . . 30 Points

3. List decisions. Everyone has important decisions to make in his or her life. Choose a time period and list eight decisions you might have had to make had you lived then. Then relist them in their order of importance - the most important as number one and continue in descending order.

   Completed Activity . . . 30 Points

4. Evaluate man. List five inventions made by prehistoric man. Evaluate the importance of each invention. Then evaluate man as an inventor.

   Completed Activity . . . 25 Points

5. Evaluate the effect of weather on man. List ways in which man adapted to each season of the year. Also list the effects of a wet and dry period on man.

   Completed Activity . . . 25 Points

6. List reasons. List several reasons why you think the Anasazi and/or Fremont left their Utah villages.

   Completed Activity . . . 20 Points

7. Evaluate weather. List changes in the weather that occurred during the time period you select. Evaluate each and how it affected man causing him to adapt.

   Completed Activity . . . 25 Points

8. Evaluate diet. Select a time frame. List the probable food man ate. Evaluate whether you think he had a healthy diet. If not, what diseases do you think might have resulted from it?

   Completed Activity . . . 25 Points

9. Evaluate extinction. List megafauna alive at the end of the Pleistocene Period. Evaluate what might have lead to the extinction of each.

Completed Activity . . . 30 Points

10. List problems. List the problems caused by drought. Evaluate these problems in terms of their effects on man.

Completed Activity . . . 20 Points

11. Evaluate extinction. List changes in Paleoindian lifestyle due to the extinction of the megafauna. Evaluate how important you think it was to him at that time.

Completed Activity . . . 20 Points

12. List changes. Man's lifestyle changed with the introduction of corn, beans and squash into his diet. List the changes which occurred and evaluate the effect of each on man's lifestyle.

Completed Activity . . . 20 Points

13. Identify weapons. List the main weapons from each period. Evaluate the advantages and disadvantages of each.

Completed Activity . . . 20 Points

14. Discuss weather. Describe changes in the weather at the end of the Ice Age. Evaluate the effects the weather had on the extinction of the megafauna and the lifestyle of man.

Completed Activity . . . 20 Points

15. List dangers. You survive in a dangerous world. List dangers you and your family face. Rewrite the list in order of importance.

Completed Activity . . . 20 points

16. List precautions. Hunting is particularly dangerous. List dangers of the hunt and describe precautions you take to counter each danger.

Completed Activity . . . 25 Points

17. Select prey. You have a variety of meat in your diet. List animals you hunt and determine when you hunt each and why.

Completed Activity . . . 25-35 Points

18. Effect of pottery. Making pottery was one of the important steps in the development of man. List the changes in man's lifestyle due to pottery and evaluate the importance of each to man.

Completed Activity . . . 25 Points

19. Effects of weaving. Weaving was one of the important steps in the development of man. List items that could be woven and evaluate the importance of each for man.

Completed Activity . . . 25 Points

20. Evaluate weapons. The atlatl and the bow and arrow were an improvement over the spear. List the advantages and evaluate the importance of each for man.

Completed Activity . . . 25 Points

21. Evaluate advantages of cooperation. There are real advantages for cooperation between people. List advantages for cooperation and evaluate each advantage as to its importance for man's survival.

Completed Activity . . . 25 Points

22. Evaluate disadvantages of warlike behavior. List disadvantages of warlike behavior and evaluate each disadvantage as to its importance in the destruction of man.

Completed Activity . . . 25 Points

23. Evaluate marshlands. A marshland is very valuable because it contains a rich supply of plants and animals useful to man. Make a list of marshland products and evaluate each item as to its usefulness to man.

Completed Activity . . . 30-50 Points

ACTIVITY VI

FORECASTING

Choose two activities:

1. List changes. What general changes occurred as a result of each of the following:

   a. The weather becomes wetter.
   b. The weather becomes drier.
   c. The megafauna becomes extinct.
   d. Pottery is made.
   e. Corn, squash, and beans are introduced.

   Completed Activity . . . 30-50 Points

2. Be Paleoindian. Pretend you are Paleoindian. Write a story and describe in detail:

   a. Your strengths and talents which help you survive.
   b. The problems you must solve to succeed in your environment.
   c. The dangers you face on a hunt.
   d. The fears you feel in life.
   e. What you do in case of sickness or illness.
   f. The importance fire has in your life.
   g. The dreams and goals that you hope to fulfill during your lifetime.

   Completed Activity . . . 30-60 Points

3. Be Archaic Man. Pretend you are Archaic man. Write a story and describe in detail:

   a. Your strengths and talents that help you to survive.
   b. The problems you must solve to survive in your environment.
   c. How the atlatl has made the hunt safer for you.
   d. Why you prefer to hunt the bison instead of the mammoth.
   e. How you discovered how to make baskets and why life is now easier.
   f. What talent would you like to have to make life more secure.
   g. If you had one wish, what would it be? Why?

   Completed Activity . . . 30-60 Points

4. Be Formative Man - Anasazi or Fremont. Pretend you are Anasazai or Fremont. Write a story and describe in detail:

   a. Your strengths and talents that help you survive.
   b. The problems you must solve to succeed in your environment.
   c. How the bow and arrow has increased your hunting ability.
   d. How planting corn, beans, and squash has changed your life.
   e. How pottery has changed your life for the better.
   f. You have had several years of drought. What will you do in the future if it continues?

   Completed Activity . . . 30-60 Points

5. Be Navaho or Shoshone. Pretend you are Navaho or Shoshone. Write a story and describe in detail:

   a. Where you came from.
   b. What caused you and your tribe to move from your homeland and to travel in the direction you did.
   c. How you feel about your new home.
   d. What are your feelings toward the people who were already living here.
   e. What could you learn from these people to improve your life and why it would improve your life.
   f. What could you teach these people who are already living in the area to improve their lifestyle.
   g. What you think the future might hold for you.

   Completed Activity . . . 30-60 Points

6. List effects of the end of the Ice Age. The effect due to the ending of the ice age were many. List at least four effects in each category: the environment, megafauna, and man.

   Completed Activity . . . 40 Points

7. List effects of a changing lake level. The Great Salt Lake increases and decreases in depth. List effects caused by first the increase and then the decrease of the water level on the environment, on plant and animal life, and on man.

   Completed Activity . . . 40-50 Points

8. List effects of changes in weapons. Weapons changed through time in Utah. List the effects on man caused by the introduction of the atlatl and the bow and arrow.

   Completed Activity . . . 30 Points

9. List effects of new crops. Corn, squash, and beans moved into Utah from the South. List the effects on man caused by the introduction of these crops into Utah.

Completed Activity . . . 30 Points

10. List effects of pottery. Methods for making pottery moved into Utah from the South. List the effects on man caused by the introduction of pottery.

Completed Activity . . . 30 Points

11. List effect of the drought. Drought frequently came into the Southwest. List at least ten effects on man, the environment and animals caused by the drought.

Completed Activity . . . 40 Points

12. Effect of new arrival. The Navaho and the Numic Tribes have arrived in Utah. List effects if any upon the Anasazi and the Fremont.

Completed Activity . . . 30 Points